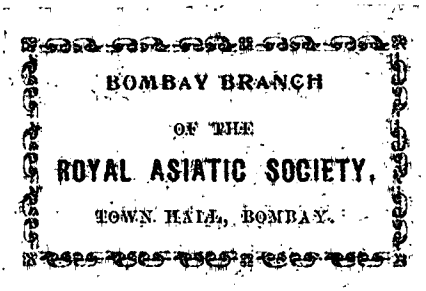
Cotton Committee, Indian Central, Proceedings

24th to 29th Meetings

1931-1934



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Abstract Proceedings

of the

Twenty-Fourth Meeting

of the

Indian Central Cotton Committee, Bombay,

held on the

14th and 15th December 1931.—19

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INDIAN CENTRAL COTTON COMMITTEE.

24TH MEETING—14TH AND 15TH DECEMBER, 1931.

ABSTRACT PROCEEDINGS.

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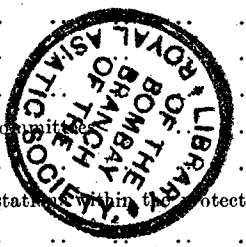

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Present :

Dewan Bahadur Sir T. Vijayaraghavacharya, K.B.E., (President), Vice-Chairman, Imperial Council of Agricultural Research.

Sir Joseph A. Kay, Kt., (Vice-President), Representative of the Bombay Chamber of Commerce.

B. C. Burt, Esq., C.I.E., M.B.E., I.A.S., Agricultural Expert, Imperial Council of Agricultural Research (ex-officio).

T. F. Main, Esq., O.B.E., I.A.S., Director of Agriculture, Representative of the Agricultural Department, Bombay Presidency.

P. B. Richards, Esq., I.A.S., Entomologist to Government, Representative of the Agricultural Department, United Provinces.

D. Milne, Esq., C.I.E., I.A.S., Director of Agriculture, Representative of the Agricultural Department, Punjab.

F. J. Plymen, Esq., C.I.E., I.A.S., Director of Agriculture, Representative of the Agricultural Department, Central Provinces.

S. D. Saklatvala, Esq., Representative of the Bombay Millowners' Association.

Chunilal B. Mehta, Esq., Representative of the Indian Merchants' Chamber.

D. McCallum, Esq., Representative of the Karachi Chamber of Commerce.

Sheth Naranlal Jivanlal, Representative of the Ahmedabad Millowners' Association.

J. Vonesch, Esq., Representative of the Tuticorin Chamber of Commerce.

W. Roberts, Esq., Representative of the Empire Cotton Growing Corporation.

Y. G. Deshpande, Esq., Commercial Representative, Central Provinces.

G. P. Chakravarty, Esq., Commercial Representative, Bengal.

M. R. Ry. V. C. Vellingiri Gounder, Avl., Representative of Cotton Growers, Madras.

M. R. Ry. K. Sarabha Reddi, Representative of Cotton Growers, Madras.

Rao Bahadur Bhimbhai Ranchodji Naik, M.L.C., Representative of Cotton Growers, Bombay Presidency.

Rao Saheb C. S. Shirahatti, Representative of Cotton Growers, Bombay Presidency.

Major D. Vanrenen, Representative of Cotton Growers, Punjab.

Rao Bahadur M. G. Deshpande, Representative of Cotton Growers, Central Provinces and Berar.

M. P. Kolhe, Esq., M.L.C., Representative of Cotton Growers, Central Provinces and Berar.

B. A. Collins, Esq., C.I.E., I.C.S., Director-General and Secretary to Government, Department of Commerce and Industries, Representative of the Hyderabad State.

C. V. Sane, Esq., Director of Agriculture, Representative of the Baroda State.

H. H. Pandya, Esq., Administrative Officer, Department of Agriculture, Representative of the Gwalior State.

F. K. Jackson, Esq., Director, Institute of Plant Industry, Indore, Representative of Rajputana and Central India States.

D. N. Mahta, Esq., Economic Botanist to Government, Central Provinces.

Dr. W. Burns, I.A.S., Principal, Agricultural College, Poona.

C. R. Palairet, Esq., Member for Commerce and Industry, Holkar Durbar, Representative of the Holkar State.

W. J. Jenkins, Esq., I.A.S., Chief Agricultural Officer, Sind.

Girdharlal B. Kotak, Esq., Representative of the Karachi Indian Merchants' Association.

Ram Prasad, Esq., Assistant Economic Botanist to Government, United Provinces.

Mohamed Azhar Ali, Esq., M.L.A., Advocate, Lucknow.

The Secretary (J. H. Ritchie, Esq., I.A.S.).

The Deputy Secretary (P. H. Rama Reddi, Esq., I.A.S.).

The Director, Technological Laboratory (Dr. Nazir Ahmed).

By invitation.

G. Boyagis, Esq., Messrs. Langley and Co., Bombay (On December 15th only).

Haridas Madhavdas, Esq., J.P., Acting President, East India Cotton Association, Ltd. (On December 15th only).

Letters and telegrams were received from the following members regretting their inability to attend the meeting :—

D. G. Munro, Esq., I.A.S., Deputy Director of Agriculture, Representative of the Agricultural Department, Madras.

F. D. Odell, Esq., I.A.S., Deputy Director of Agriculture, Representative of the Agricultural Department, Burma.

The Director-General of Commercial Intelligence & Statistics.

J. Tinker, Esq., Representative of the Upper India Chamber of Commerce.

H. B. Moore, Esq., Commercial Representative, Madras.

Ch. Zafrulla Khan, M.L.C., Commercial Representative, Punjab.

Dr. L. C. Coleman, C.I.E., Director of Agriculture, Representative of the Mysore State.

M. R. Ry. V. Ramanatha Iyer, Avargal, Cotton Specialist, Coimbatore.

President's (Sir T. Vijayaraghavacharaya's) Speech.

I have great pleasure in welcoming you to this—the 24th meeting of the Indian Central Cotton Committee and my pleasure is all the more keen because I was not able to meet you at the two previous meetings.

My first duty is a sad one, viz., to inform you of the recent death of one of our members—Rao Bahadur K. J. Deshmukh—who joined the Committee in 1927 as representative of the ginning industry in the Central Provinces and Berar. The late Rao Bahadur was considered one of the most progressive agriculturists in Berar and the success of the Khamgaon Taluk Association, of which he was an original member, is mainly due to the time and enthusiasm he devoted to its working and his great belief in co-operation amongst the growers. Some of the success which the Agricultural Department's recent cotton selection—*Verum*—has had in the Buldana District of Berar must also be credited to him.

In his address to the meeting in July of this year, the Chairman—Sir Joseph Kay—deplored the severance from the Committee of one of its oldest members, Sir Purshotamdas Thakurdas, and he voiced the feelings of all when he hoped Sir Purshotamdas Thakurdas' absence would be temporary only. I am sure you will all rejoice with me at the fulfilment of that hope since Sir Purshotamdas Thakurdas has been renominated to the Committee, though unfortunately, owing to his duties in London, he finds it impossible to be present to-day. We have at this meeting to deplore the loss to the Committee of a most esteemed and valuable member but who, we trust, will also find himself back with us in the near future. Mr. Ellis Jones was one of the original members of the Committee and for ten years has not spared himself in helping forward its work. Since the beginning he has figured prominently on every Sub-Committee

and for two years performed the arduous duties of Vice-President. Few members are aware of the amount of work which Mr. Ellis Jones has put in for the Technological Laboratory. Every sample of cotton received since the Laboratory started work has been graded by him and his report has appeared in every Spinning Report. Though he is not at present a member of the Committee, he has of his own accord agreed to carry on this work in order that continuity may be preserved. I wish to acknowledge the high debt which the Committee owes to Mr. Ellis Jones; we shall welcome his return.

Our agenda, though not as long as usual, contains some subjects as important as have ever been before the Committee. At our July meeting, we considered a note prepared by the Secretary on the research work in progress and a tentative programme for the next five years. This note was circulated to all Trade Associations in India and to many individuals and their views solicited. Though replies have not been received from all to whom the pamphlet was sent, several very interesting and thoughtful comments and criticisms have been received and it is our duty at this meeting to study them. I am sure we shall find them of the greatest use in helping us to come to a decision regarding our future policy and I wish to thank those individuals and associations, who replied, for the trouble they have taken to give us their views.

I wish at this stage to remove a misapprehension which is all too common and which has again come prominently to the fore with the circulation of the above mentioned pamphlet, viz., that the Central Cotton Committee is responsible for the cotton work and policy in the Provinces. It cannot be too sufficiently emphasised that the work of improvement in cotton, as in other crops, is the duty of the several Agricultural Departments in India and all the Committee does is to supplement that work especially by supplying funds for the provision of staff and equipment to carry out specific investigations which the Provinces are not in a position to carry out themselves. Nor does the Committee lay down a policy for the Provinces to follow. Owing to its representative character the Committee is, I venture to claim, eminently qualified to advise provincial authorities in regard to cotton matters and can fortify its advice by financial assistance. But it does not possess, and indeed has never sought, the authority to carry out a policy for cotton improvement in India. That is the function of the Agricultural Department.

The chief problem which will engage our attention is—what types of cotton should be grown in India? Nearly all recent improvement in Indian cottons has been in the direction of increased length of staple and higher counts and research workers have been trying, some with considerable success, to combine the high outturn of the short-staple types with the staple length of the finer Indian varieties. From the growers' point of view, which is shared by every one who has the growers' interests at heart, the cotton recommended should be the one which

gives the highest net monetary return. There can be no doubt that the improved longer staple cottons, which are being distributed at present, do give the grower an increased income, but whether this will continue if a large part of the short staple crop is replaced by cottons which spin from 16's to 30's is another matter. There is undoubtedly an increasing demand for long staple cotton by the Indian mills which would find it to their interest to obtain it at their doors rather than have to import it. India can, and I wish to emphasise the word *can*, India can grow enough of 30's and 40's cottons for her present mill requirements, but will the premium paid be sufficient to compensate the grower for the loss in outturn and ginning percentage which he is almost bound to suffer ? To quote an example, the grower of the unimproved *Gaorani* must receive a premium of about Rs. 50 a candy if it is to be worth while growing in preference to the shorter staple *Neglectums*. Sind is capable of growing long staple cotton of the Egyptian type but as far as can be seen at present it will not pay the grower unless it fetches a much higher price than is likely to be paid for it. It need not be thought that India cannot and does not produce cottons capable of spinning high counts, for it has been found at the Technological Laboratory that several Indian cottons when combed are suited for the high counts for which much American and Egyptian cotton is imported. Trials are still in progress and the results when available may show that several of the existing improved varieties of Indian cottons are capable of taking the place of all but the very finest of Egyptians. Nor is it only a question of forecasting the needs of Indian mills and of prophesying the lines on which the great Indian textile industry will develop. The relative prices for long and short stapled cottons depend very largely on the export demand for the latter. How far can we depend on the demand of foreign countries for short staple cotton in future ?

The subject then on which Directors of Agriculture and those responsible for policy would like to have your views may be summarised as follows :—

(1) India is capable of growing its own present mill requirements of long staple cotton but will it pay the grower in every case ?

(2) If staple cotton replaces the short staple varieties at present grown, what effect will that have on the price of the two commodities ?

These are the two big problems to be considered. I am aware that the Committee has already considered them with reference to the type of cotton that should be grown in Sind and the verdict arrived at was that the Agricultural Department should recommend the varieties which give the highest return to the grower. I am sure the same decision will be arrived at, but it is necessary to take a long-sighted view because if short staple cotton becomes scarce, it may pay the grower better than the longer-stapled varieties and the effect of placing on to the world's

markets, say, an extra three million bales of cotton which can be used in place of Middling American, requires careful consideration.

Another question for discussion is that of publicity and propaganda by the Committee. At the last meeting the Committee adopted a report of the Local Sub-Committee one item of which was that Directors of Agriculture should be asked to submit proposals for the extension of publicity and propaganda with regard to the Committee's work in the Provinces and to indicate in what manner and to what extent the assistance of the Committee could be most profitably utilised in such work. Replies have been received from all Directors of Agriculture and the Committee will have to decide what action should be taken on them.

Another very important subject for discussion is the policy which the Committee wishes to be followed at the Indore Institute of Plant Industry. It will be remembered that this subject also came up at the last meeting but discussion was postponed to enable the new Director —Mr. Jackson—to become acquainted with the work and to give the Committee an opportunity of hearing his views on the subject.

One of our members has introduced into the Central Provinces Legislative Council a Bill for the purpose of organising open regulated cotton markets in the Central Provinces on the lines of those in Berar. The Committee has always given its support to every effort made to supply the grower of cotton with a market in the management of which he has some say, and I am sure you will not withhold your support in this instance.

Last year, you sanctioned funds to permit of three investigations being carried out into the effect of pools of ginning and pressing factories on the price paid to the grower for his produce. The Local Governments of the Central Provinces, Bombay and Ajmer-Merwara agreed to carry out these enquiries and reports have now been received from them and are before you for decision what action should be recommended.

The usual reports of the Agricultural Research Sub-Committee, the Technological Research Sub-Committee and the Standing Finance Sub-Committee are included on the agenda, as well as a summary of the Proceedings of the Local Sub-Committee which has dealt with all matters unconnected with finance since the last meeting of the Committee. The Budget prepared by the Standing Finance Sub-Committee is liable to amendment as a result of your decisions on the Reports of the Agricultural and the Technological Research Sub-Committees. The report of the Standing Finance Sub-Committee shows you the action taken by it since the last meeting.

Gentlemen, I shall not keep you any longer from the work before you. The Technological Research and Agricultural Research Sub-Committees have already met and we shall therefore carry right on with the work of the Committee.

SUBJECT 2.—**Confirmation of Minutes.**

The Minutes of the 23rd meeting were confirmed.

SUBJECT 3.—**Retirement of members by rotation.**

The Secretary's note* was recorded.

SUBJECT 4.—****Appointment of Vice-President and Sub-Committees.**

Mr. Burt proposed the following resolution which was seconded by **Mr. Saklatvala** and carried unanimously :—

RESOLUTION 1.—"That Sir Joseph A. Kay be appointed Vice-President of the Committee for the year 1932-33."

Standing Finance Sub-Committee.

Mr. Jenkins proposed :—

RESOLUTION 2.—"That the following members be appointed to form the Standing Finance Sub-Committee for the financial year 1932-33 :—

Sir Joseph A. Kay (Vice-President),

Dewan Bahadur Sir T. Vijayaraghavacharya (ex-officio),

Sir Purshotamdas Thakurdas,

Mr. S. D. Saklatvala,

Rao Bahadur Bhimbhai Ranchodji Naik,

Mr. J. Vonesch,

Rao Bahadur M. G. Deshpande,

Mr. D. McCallum,

Mr. Chunilal B. Mehta."

This was seconded by **Mr. Plymen** and carried unanimously.

Cotton Ginning and Pressing Factories Sub-Committee.

Mr. Milne moved—

RESOLUTION 3.—"That the following members be appointed to form the Cotton Ginning and Pressing Factories Sub-Committee :—

Sir Joseph A. Kay (Vice-President),

Sir Purshotamdas Thakurdas,

Mr. S. D. Saklatvala,

Mr. D. McCallum,

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* Appendix I. (Page 46).

** Appendix II. (Page 46).

Mr. J. Vonesch,

Mr. Chunilal B. Mehta,

Mr. W. Roberts,

Mr. H. B. Moore,

Mr. J. Tinker,

Mr. Y. G. Deshpande,

Sardar Sampuran Singh."

This was seconded by **Rao Bahadur Bhimbhai Ranchodji Naik** and carried unanimously.

Local Sub-Committee.

The Vice-President then proposed :—

RESOLUTION 4.—"That the following members be appointed to compose the Local Sub-Committee :—

Sir Joseph A. Kay (Vice-President),

Dewan Bahadur Sir T. Vijayaraghavacharya,

Sir Purshotamdas Thakurdas,

Mr. S. D. Saklatvala,

Rao Bahadur Bhimbhai Ranchodji Naik,

Mr. J. Vonesch,

Rao Bahadur M. G. Deshpande,

Mr. D. McCallum,

Mr. Chunilal B. Mehta."

This was seconded by **Mr. Chunilal B. Mehta** and carried unanimously.

Agricultural Research Sub-Committee.

The President moved :—

RESOLUTION 5.—"That the following members be appointed to form the Agricultural Research Sub-Committee :—

I. Ex-officio—Dewan Bahadur Sir T. Vijayaraghayacharya,

II. The Vice-President—Sir Joseph A. Kay,

III. The Director, Institute of Plant Industry, Indore—Mr. F. K. Jackson,

IV. Co-operative representative—Sardar Sampuran Singh,

V. Cotton growers' representative—Mr. W. Roberts,

VI. Cotton Trade representative—Sir Purshotamdas Thakurdas,

VII. Four Agricultural Officers—Mr. T. F. Main,
Mr. F. J. Plymen,
Mr. D. Milne,
Mr. V. Ramanatha Iyer,

VIII. Additional members—Mr. B. C. Burt,
Dr. L. Coleman,
Dr. W. Burns,
Mr. D. N. Mahta,
Mr. Ram Prasad,
Mr. H. H. Pandya,
Mr. W. J. Jenkins,
Mr. P. B. Richards,
Mr. B. A. Collins,
Mr. D. G. Munro,
Mr. C. V. Sane,

IX. Co-opted member—Sucessor to Mr. Trevor Trought,

X. The Secretary."

This was seconded by the Vice-President and carried unanimously.

Technological Research Sub-Committee.

The President then moved :—

RESOLUTION 6.—"That the following members form the Technological Research Sub-Committee :—

The President,
The Vice-President, } ex-officio.

Mr. S. D. Saklatvala,

Mr. B. C. Burt,

Mr. D. Milne,

Mr. T. F. Main,

Mr. Chunilal B. Mehta,

Mr. Y. G. Deshpande,

Sheth Naranlal Jivanlal.

The Bombay Millowners' Association, the Ahmedabad Millowners' Association and the East India Cotton Association will be asked to nominate two representatives each."

This was seconded by the **Vice-President** and carried unanimously.

Research Students Selection Sub-Committee.

The President then proposed :—

RESOLUTION 7.—"That the Research Students Selection Sub-Committee be composed of the following members :—

The President,

The Vice-President,

Sir Purshotamdas Thakurdas,

Mr. S. D. Saklatvala,

Mr. B. C. Burt,

Dr. W. Burns,

Mr. P. B. Richards,

Mr. D. Milne,

Mr. F. J. Plymen,

Dr. L. C. Coleman,

Mr. H. H. Pandya,

Mr. T. F. Main,

Mr. W. J. Jenkins,

Mr. C. V. Sane,

Mr. F. K. Jackson,

Dr. Nazir Ahmad."

This was seconded by the **Vice-President** and carried unanimously.

Sub-Committee on Malpractices.

The President then moved.—

RESOLUTION 8.—"That the Sub-Committee on Malpractices consist of the following members :—

The Vice-President,

Mr. S. D. Saklatvala,

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Sir Purshotamdas Thakurdas,

Mr. D. McCallum,

Mr. Chunilal B. Mehta,

Mr. T. F. Main,

Rao Bahadur Bhimbhai Ranchodji Naik,

with power to co-opt."

This was seconded by **Major D. Vanrenen** and carried unanimously.

SUBJECT. 5—**Cotton Transport Act—Madras.**

The Secretary's note* was recorded.

SUBJECT 6.—**Cotton Transport Act—Indore—Railway Stations within the protected area.**

The Secretary's note** was recorded.

SUBJECT 7.—**Cotton Policy in Gujerat.**

The Secretary's note and letter† from the Deputy Director of Agriculture, Gujerat, were considered.

After some discussion the proposals of the Deputy Director of Agriculture, Gujerat, for testing the 1027 and 1-A varieties of cotton were amended as follows :—

"The number of replications to be carried out at each site should be five instead of two, and the cotton from each site only should be mixed for testing at the Technological Laboratory instead of the cotton from all the sites in a Taluka as was suggested."

SUBJECT 8.—**Central Provinces Cotton Market Bill.**

The Secretary's note and Draft Bill*** were considered.

The following resolution proposed by **Mr. Kolhe** and seconded by **Mr. Collins** was passed unanimously :—

RESOLUTION 9.—"The Central Cotton Committee approves in principle of the draft bill which has been introduced by a private member into the Central Provinces Legislative Council for supplying the Central Provinces with organised cotton markets on the lines of those in Berar."

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* Appendix III (Page 49).

** Appendix IV (Page 50).

† Appendix V. (Page 51).

*** Appendix VI. (Page 52).

SUBJECT 9.—**Madras Cotton Control Bill.**

The Secretary's note* was considered.

The following resolution, proposed by **Mr. Vonesch** and seconded by **Mr. Burt,** was passed :—

RESOLUTION 10.—"The Central Cotton Committee approves of the action taken by the Local Sub-Committee in recommending to the Madras Government less drastic legislation under the Madras Cotton Control Bill provided that the scope of the Bill is restricted to the growing of *Pulichai* cotton in the Tinnevelly area."

Summary of discussion.

Several of the growers' representatives were opposed to the Committee interfering with the variety of cotton that the cultivators should grow, but it was pointed out that *Pulichai* was a cotton foreign to the Tinnevelly District and was grown merely for the sake of adulteration. The effect on the general level of prices for Tinnevelly cotton, if no check were put on the growth of *Pulichai*, would be disastrous to the cotton growers of the whole tract. The principle of the Bill was approved provided legislation was confined to dealing with *Pulichai* cotton only.

SUBJECT 10.—**Cotton Ginning and Pressing Factories Act—Progress made in Indian States.**

The Secretary's note** was recorded.

SUBJECT 11.—**Cotton Ginning and Pressing Factories Pools—†Report of the Local Sub-Committee on the reports of investigations carried out in the Central Provinces, Ajmer-Merwara and Bombay Presidency.**

Sir Joseph Kay proposed and **Mr. D. N. Mahta** seconded the following resolution which was passed by a majority :—

RESOLUTION 11.—"That the Report of the Local Sub-Committee on Pools of cotton ginning and pressing factories be adopted."

Summary of discussion.

The growers' representatives on the Committee considered that the recommendation of the Local Sub-Committee on the reports of Local Governments on the effect of pools on the price paid to the grower for his cotton did not go far enough and desired the Committee to urge Local Governments to undertake legislation to put a stop to this evil by the fixation of maximum prices. Other members recommended that the Committee should again take up the question of the licensing of gins

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* Appendix VII (Page 58).

** Appendix VIII. (Page 60). † Appenpix IX. (Page 61).

and presses and so give power to the authorities to put a stop to all such evils and malpractices. Several members were of opinion that complete reliance could not be placed on the figures in the report as the investigators had to rely on the statements of interested parties. Others maintained that the formation of pools was the outcome of the present day tendency for rationalisation so as to reduce costs and if pools were prohibited, the stronger concerns would soon obtain a monopoly and prices would go up considerably.

SUBJECT 12.—**Establishment of Markets under the Hyderabad Agricultural Markets Act.**

The Secretary's note@ was recorded.

SUBJECT 13.—**Proposed United Provinces Entomological Extension Scheme.**

This subject was considered under the Report of the Agricultural Research Sub-Committee (Subject 19).

SUBJECT 14.—**Summary of Proceedings of the Local Sub-Committee.**

The Secretary's note* was approved.

SUBJECT 15.—**Publicity and Propaganda work by the Committee-Report of the Local Sub-Committee on replies received from Provincial Directors of Agriculture.**

The Report** of the Local Sub-Committee was considered.

Sir Joseph Kay proposed the following resolution which was seconded by **Rao Bahadur Bhimbhai Ranchodji Naik** and carried unanimously :—

RESOLUTION 12.—"That the Report of the Local Sub-Committee on the replies received from Provincial Directors of Agriculture on Publicity and Propaganda be adopted."

Summary of discussion.

All speakers on this subject stressed the need for the Committee undertaking publicity and propaganda and approved of the recommendation of the Local Sub-Committee that this could best be done by attaching to the Committee's staff a professional journalist or publicity expert who, in consultation with the provincial authorities, would devise schemes to keep the grower, the trade and the general public informed of the Committee's work and aims as well as to encourage the growers to adopt into general practice the results of the Committee's Research Schemes.

@ Appendix X, (Page 62).

* Appendix XI (Page 63). ** Appendix XII (Page 64).

SUBJECT 16.—**Review of the Committee's work and Research Policy—Opinions received on the pamphlet "Cotton Improvement in India."**

[The discussion on this subject is given *in extenso*—Secretary, I. C. C. C.].

The Vice-President said: "With your permission, Sir, I would like to speak at the opening of the discussion on our "past work and future policy" because I think if we deal first with the criticisms which we have received on our past several years' efforts it will facilitate matters when we come to formulate our policy for the future, and as Vice-President of the Committee—and, perhaps, one of its oldest members—it falls to my lot to defend the policy which we have worked, with, I submit, some great measure of success—and to explain, in so far as I can, the reasons why, in one or two cases, we have not been able to achieve results such as all of us would desire.

Let me in the first place say that, as most of you know, it was decided at the last meeting to print and distribute to all interested the able "Note" prepared by the Secretary so that we might have the views of any individual or association interested in the improvement of Indian cotton to help us in the light of their experience and our own to put our future policy on as sound a basis as possible. Nearly 2,500 copies of this pamphlet were distributed and so far only some ten replies have been received. I am sure it must be a source of disappointment to members, as it is to me, that so little apparent interest is taken in our work, but maybe the fault, to some extent, is our own owing to our not having kept the public better informed of our doings—but on this I shall have more to say when we come to discuss publicity and propaganda.

Now Sir, we can, I think, consider very fair on the whole the criticisms we have received and we have certainly received helpful suggestions for the future, which I leave for discussion by members later, and it is gratifying to find that the work of our Scientists and Agricultural Officers is appreciated for anyone who has taken any interest in cotton work during the past five years must admit that a very great deal of scientific knowledge has been acquired, and this must be of tremendous value to those workers who have to deal with the problems of the future.

You will see, Sir, from the replies received that mention is made of the disappointment—in some quarters—that little or no progress has been made in the improvement of certain styles of Indian cotton, in fact, it is mentioned that actual deterioration has taken place. I have no doubt those statements will be dealt with by the Agricultural Officers concerned in those particular districts, but in case any wrong impression may be created, I want to say that Indian cottons are finding a better appreciation in the world's markets than they have ever done before and one has only to go back a few years to find that their reputation was at a low ebb, whilst we are now getting indications that countries will and

can trade in our coton with more confidence. Let me give you instances of how some of the world's experts regard Indian cottons to-day :—

In an Annual Review on the world's cotton situation in 1929 Professor J. A. Todd said "Coming now to the lowest grade, short cotton of less than an inch staple, the main sources of supply are of course India and China. With regard to India it is very satisfactory to note that the advance made in the development of supplies of inch staple cotton has also extended to the shorter staple varieties, all of which have been subjected to a steady process of improvement by seed selection and the introduction of new varieties, so that there is now very little left of the old really short staple varieties below half an inch in staple."

In his address at Houston, Texas, on January 27th, 1931, Mr. W. L. Clayton remarked "On the other hand, India, our chief competitor, shows some improvement in yield and a great improvement in quality."

Mr. A. B. Cox, Director, Bureau of Business Research at the University of Texas in his article entitled "Methods for the improvement of the quality of East Indian Cotton" said "Until recent years, the gradual deterioration in the quality of Indian cotton has been a condition baffling all attempts at correction. The improvement of quality since the World War has been equally phenomenal."

In an Annual Review on the world's cotton situation in 1931 Professor J. A. Todd stated "Thus on the low side the Indian crop, once regarded as far below American in quality, has been so greatly improved in the last 20 years that the best of it is now better than a large part of the American crop. India now produces at least 1½ million bales (or nearly one-third of her total crop) which is of $\frac{7}{8}''$ staple and above, whereas in 1929 America produced nearly 3 million bales (or 20 per cent of her crop) which was below $\frac{7}{8}''$. And this improvement of the Indian crop is going on steadily."

I want next to deal briefly with the progress made in regard to the size of the crop.

The average crop in the first five years of this century was 3,903,000 bales grown in an area of 18 million acres ; the average for the next five years was 4,414,000 bales obtained from 21½ million acres ; from 1911 to 1916 the average was 4,816,000 bales from 22¼ million acres ; from 1916 to 1921 the average was 4,752,000 bales from 22½ million acres ; from 1921 to 1926 the average was 6,324,000 bales from 23¾ million acres. The 1926-31 average was 6,340,000 bales from 25¼ million acres. In other words there has been an average increase during the last ten years of a little over 1½ million bales from an increased area of 2¾ million acres. Even more significant is the average yield of lint per acre during the decade. The average for the five years ending 1921 was 84 lbs. per acre while the yield for the five years ending 1931 averaged 100 lbs. The figures of yield given above are the Commercial Crop and have been,

worked out by adding together the exports, the mill consumption and the village consumption. These figures appear to me to prove quite conclusively that the Indian grower is obtaining higher yields either from improved seed, or by adopting better methods of agriculture.

On the legislative side of our work it is pleasing to see that the Cotton Transport Act and the Bombay Marketing Bill have met with general approval, but the Cotton Ginning and Pressing Factories Act comes in for severe criticism from the Trade, which is a little surprising, as the Trade asked for the legislation and it was intended that the Trade should work it. This Act was passed by the Legislative Assembly at the request of this Committee for the purpose of marking bales so that the many abuses which up to that time were so prevalent in Indian cotton could be traced back to their perpetrators. One item in the terms of reference given to the Indian Cotton Committee in 1917 read "and by the prevention of the harmful practices of adulteration and damping which have done so much in the past to lower the reputation of Indian cotton." The two opening sentences of paragraph 214 of the Report of the same Committee contain the following ominous words :—

> "The condition in which Indian cotton is placed on the market as the result of the practices of adulteration, mixing and damping has made it a by-word in certain markets almost throughout the history of the British connection with India. The question of restoring its reputation by the prevention of these malpractices is one to which we have given the most serious consideration."

None will disagree with me when I say that adulteration and mixing were rampant in India before the passing of the Cotton Ginning and Pressing Factories Act and the Cotton Transport Act, the one being complementary to the other. This is easily proved by the fact that in 1925 we had a good number of complaints from the International Federation of Master Cotton Spinners and also the Bremen Cotton Exchange pointing out to us the serious complaints they were receiving from several countries about the great number of badly packed and mixed bales they were receiving, and they referred to the large quantity of broken seed, shells, string and jute which were contained in these bales. What has the Act done to improve the way in which Indian cotton comes on the world's markets ? Except for a few stray cases of bales having cut seed and oil stains, not one case of false packing has been reported to the Committee from abroad since the marking of bales was made compulsory. Surely this in itself is sufficient justification for the passing of the Act. I have heard many severe strictures on the Act from members of the trade who feel it a handicap. When the Bill was before the Legislative Assembly in 1924, the Hon'ble Sir Charles Innes in introducing it, said : "It may be said that this is just the sort of abuse which the trade may be be left to deal with by themselves. On that point the Indian Cotton Committee definitely reported that the trade unaided could not deal with the abuse. They further said that legislation should be undertaken

to enable the trade to deal with these malpractices and abuses. They made various suggestions as to the restrictions which should be put on Cotton Ginneries and Cotton Presses, and they made a further proposal that those restrictions should be made effective by a system of licensing of Ginneries and Presses in India." It was control of the trade by the trade through the trade. If, as has been stated, the Act is not working satisfactorily, it can only be the trade which is at fault. The number of cases reported of incorrectly marked bales, or of failure to mark bales, has been so few recently that the Committee can only surmise that the Act has been working smoothly. A circular letter issued to all Trade Associations in India this year regarding the marking of bales elicited practically nothing but satisfactory replies. In addition to showing the changes which have taken place, it is interesting to notice that at the International Cotton Congress held in Paris this year Mr. Joseph Wild of England made the following statement:—"I think as we have no other definite complaints to make against Indian cotton, it would be a suitable opportunity for us to express to the Indian Central Cotton Committee and to the Indian Government our satisfaction with the measures that are being taken to deal with the various problems in the production of raw cotton and the handling thereof. I think a resolution to this effect should be drawn up, and submitted to this Congress." This was agreed to.

I agree that the Act should be tightened up, but to repeal it, as has been suggested, will be the greatest blow to all concerned with the cotton industry in India. One method of tightening up this piece of legislation is to obtain greater control over all Ginneries and Presses by a system of licensing which this Committee suggested in the first place to the Government of India. If the Indian Central Cotton Committee takes this matter up with the Government of India, will the trade give its full support to enable the necessary legislation to be carried through the Assembly ? Presumbly they will, for, if, as has been asserted, the Act is not working satisfactorily, they will want greater control, for I cannot believe that they wish to revert to the conditions of ten years ago. It must be borne in mind that the Cotton Ginning and Pressing Factories Act cannot be divorced from the Cotton Transport Act, as the one is essential to the other.

I think, Sir, that deals with the many points raised in the replies we received on our past work and I leave it to you, gentlemen, now to discuss matters such as "Should long staple cotton be grown in a short staple area" and the other suggestions which have been made, so that we may, so far as is possible, confine our efforts to the right direction."

Mr. Saklatvala said he was speaking in a dual capacity, first as a member of the Indian Central Cotton Committee who had represented the Bombay Millowners' Association from 1923, and secondly as a consumer. From the various criticisms that had been received it was clear to him that people put too much stress on the fact that the quality of cotton

varied considerably during different seasons, but this did not only pertain to Indian cotton, for every one knew that the American crop was not what it used to be. In India it was possible that the crop in a particular district had deteriorated, but no one should jump to the conclusion that because of this the work of the Committee was useless. This was generalising to a degree, and was unfair to the Committee. The note from the Millowners' Association referred to the deterioration that had taken place in the Central Provinces and Berar cottons and it was possible here to find a clue to this deterioration. It was not the Agricultural Department and the Central Cotton Committee who were to blame, but the middlemen who were responsible by reason of the malpractices which they indulged in. The Committee had been blamed for recommending the passing of legislation to control the trade and now were also being blamed for not recommending further legislation. He wished to say also that the consumers had not played their part to the extent they should have. The Committee had always tried to encourage the growing of better varieties, but it could not be said that the millowners had helped them in any way. In his opinion the consumers should co-operate and give a good premium for improved varieties. It was not the work of the Central Cotton Committee that required looking into, but the question of the marketing of the crop. He suggested that critics should come forward with definite suggestions and if they were good, the Committee would be prepared to spend money to carry them into effect. It was no good blaming the Committee for what had happened and for what had not happened. Last year he had tried *Verum* cotton in his mills and the results had not proved very satisfactory, but he did not jump to the conclusion that the blame should be placed on the Committee or on the Agricultural Department. The merchants were responsible for the trouble. People who have had bad experience of any particular cotton should write to the Committee to enable the Committee to look into the matter. Regarding *1027* cotton in the Surat area he wished to call the attention of the Millowners' Association with regard to the premium to be paid for this variety. If the grower did not get a better premium for it, it would be replaced by 1A. The Committee, he considered, should get the co-operation of the millowners with regard to co-operative sales. Sometimes the buyers combined and offered low prices. It was necessary, in his opinion, that good prices should be given if an improved variety of cotton was to be grown. In the last paragraph of the Millowners' note it was stated that they did not know if the Committee kept in touch with the consumers. In this connection, Mr. Saklatvala pointed out that not only did the Technological Laboratory send out pamphlets and circulars dealing with tests on cotton but they had co-opted two of their members on the Technological Research Sub-Committee. He considered that not only was more publicity required by the Committee, but also that more co-operation was necessary from critics. There was one seuggestion he wished to make, viz., regarding the picking of cotton. In the trade the

price depended on the loss percentage of the cotton. He considered that side by side with its scientific work, the Committee should take in hand this aspect of the question and advise the growers as to the best time to pick, etc. The Committee might also consider an investigation into the best methods of storing *kapas*. The grower was ignorant and illiterate and thought the more dirt he got into his cotton the more money he would make. This kind of work would be appreciated greatly by the trade and by the consumers. He said he would like to go a step further and compel ginners to instal openers for cleaning *kapas*. This would improve the quality of Indian cotton immensely. At present many varieties fetched very low prices because of their leafiness and the consumer would pay relatively much higher prices for less leafy cottons. If *Umri* cotton could show 3-4 per cent less loss it would fetch much more than a proportionately higher price.

Mr. Plymen prefixed his remarks by reading that part of the President's opening address which dealt with the differentiation between the work of the Committee and that of the Agricultural Department. He said that the principle seemed to be accepted that it was the work of the Agricultural Department to develop a cotton policy. A policy should be based on a long-sighted view of the trade and he thought the Committee was in a much better position in that respect than to allow the Agricultural Departments to lay down a policy for themselves. The Bombay Chamber of Commerce had stated in their note that certain varieties of cotton had deteriorated. He wished to know how they had deteriorated—in quality, yield or staple. In the Central Provinces and Berar there was an area of nearly 6,000,000 acres under cotton with an outturn of roughly 1,000,000 bales. He asked how much of this area should be put under *Verum*, *Roseum* and ordinary *Oomras*. If they were guided by the Central Cotton Committee it would be possible to control the purity by seed distribution schemes. If they continued with *Verum* they might reach a peak where its relative price would fall. Should the Agricultural Department encourage *Verum* cotton up to half the available area or in what proportion should it be distributed? The question of improved varieties he would leave to Mr. Mahta who would describe the cottons under development at the present moment. Another point which struck him was, did the trade want *Bani*!? Did the Committee think that the Department should go on with it? One suggestion was to the effect that the Committee should pay more attention to *wilt* and *root-rot*. A considerable amount of mortality took place this year amongst young seedlings and it was difficult to say what the reason was, but it was probably due to flooding. Regarding the complaints about samples of *Verum* cotton, he said the Department had means of tracing bad lots back by means of the Cotton Ginning and Pressing Factories Act. If the Department were to receive complaints they would be looked into. Last year one such complaint had been received and on investigation it was found that the so-called *Verum* was not *Verum* cotton at all. The Agricultural Department was in a

definite position to give help of this nature if complaints regarding cotton were received. By the combined effort of the trade and the Agricultural Department they would be in a position to find out those persons who were passing off inferior cottons as *Verum*. He thought it might be possible to stimulate the grower by means of prize schemes and this he had mentioned in his note. At the present moment they were giving prizes for good yield and good samples and if the Committee were anxious to encourage cleaner picking, the offer of a few prizes would be of considerable assistance.

Mr. Jenkins said he felt that a considerable number of the complaints received from various commercial bodies regarding the deterioration of various Indian cottons in the past few years might be discounted for different reasons. Improved varieties of cotton, like race horses, were subject to temporary loss of form due to various causes but this was no adequate reason why they should be condemned as failures after a short period of trial. He felt sure that, if the trade decided to follow up a particular improved variety of cotton, they would get good returns for their support in the long run. He was certain that it was the general concensus of opinion that the work of the Central Cotton Committee had made a tremendous difference to cotton production in all parts of India and that, if there had been no Committee, progress would have been very slow and, in these times of financial stringency, the future of cotton production in India would have been very black indeed. He was particularly interested in the question of stapled cottons and their future extension in India as under the Lloyd Barrage and canal systems in Sind, he hoped to be able to increase the cultivation of long stapled cottons which would bring increased profits to the growers and which would meet trade demands. In this connection, he wished to correct a common misapprehension that existed to the effect that large blocks of new and hitherto uncultivated land would be available for development after the opening of the Lloyd Barrage. It was true that large areas of new land would be available for cultivation then but these areas were, for the most part, interspersed with land already under cultivation so that the proposals put forward for segregating new lands for long stapled cotton cultivation could not be easily put into effect. Regarding the growth of stapled cottons in short stapled areas, this problem was simplified in Sind by the preference of the growers themselves in certain compact tracts for long stapled varieties of cotton. He thought that, in time, it would be possible to confine the Jamrao canal tracts to long stapled cotton cultivation although, in this connection, it might be found necessary to utilise the provisions of the Cotton Transport Act to protect definite areas. He would like to have the Committee's view on what constitutes a "long stapled" cotton. Was this term applicable to cottons with a staple length of from $\frac{7}{8}$-1″ or to cottons above 1″ in staple only? With regard to the extension of long stapled cottons in Sind, it must also be remembered that, so far as experimental work had gone, the yield per acre had been found to be in inverse ratio to the staple

length of the varieties which had been tested. With regard to the future research programme of the Committee, he felt that work should be concentrated on such items of research work as gave the best promise of resulting in practical results within the shortest possible period of time. In this connection, he laid special stress on any research work designed to increase cotton yields per acre. He, accordingly, advocated that preference should be given to schemes of "short term" research as opposed to "long term" research. He agreed fully with everything said by Mr. Collins in his note on the importance of research work into the improvement of cotton agronomy as much greater advantage would accrue to the cotton growers by a general adoption of better methods of cotton cultivation than by the introduction of new varieties or by the extension of measures against cotton pests and diseases. Finally he expressed the opinion that, if more publicity had been given to the work of the Committee in the past, many of the opinions now received would have been couched in different language and he felt sure that, if the Committee now embarked on a definite policy of propaganda and publicity, similar opinions called for in five years' time would differ considerably from those now under consideration with regard to the results of the policy and work of the Committee.

Mr. Vonesch said the Committee had received very few criticisms and this was because its work was not generally known. It was impossible to lay down one policy for the whole of India because of India's vast extent. What put a limitation on the Committee's schemes was the lack of finance, but this could be remedied by raising the cess. The lack of finance prevented the Committee starting schemes which would help the grower directly. Whether the efforts of the Central Cotton Committee should be devoted to long or short staple cottons was, he considered, partly solved by the climatic conditions of the country. It was his opinion that long staple cottons would not be generally grown. He thought it would be a mistake for the Committee to forget that India had a monopoly of short staple cottons and the moment India went into the long staple field it would compete with America and there would be a general decline in price which was determined by the price of the export crop. In reply to Mr. Jenkins, he said long staple cotton was anything over 7/8".

Dr. Burns said Mr. Jenkins had drawn an analogy between improved cottons and a race-horse and he would also follow suit with another one. Recently on the G. I. P. Railway the arch of a bridge gave way. The Engineers put two iron girders across the breach and the traffic went on while the arch was being rebuilt. The Committee's investigations into *wilt* might be compared to this. The immediate action was to get wilt-resistant strains, but the work should not rest there. It should be carried on until all it was possible to find out about the disease was discovered. In this case the Committee had not rested there for it had financed a scheme to study this problem. Most cotton problems had to be dealt with like this. There was for example, the question of yield.

The immediate action necessary was the production of high yielding varieties, but the whole question of what factor determined yield and how these could be influenced required investigation, and this would take time. Similarly the question of leafiness in cotton had been mentioned in the debate. The immediate remedy was clean picking, but the ultimate solution was probably one for the plant breeder, in producing a type of cotton in which the bracteoles did not get mixed up with the lint. The Indian Central Cotton Committee should therefore concern itself with fundamental investigations as well as finding immediate remedies.

Rao Bahadur Bhimbhai Ranchodji Naik said he was not capable of passing any remarks on the opinions of the trade associations. He agreed with Messrs. Jenkins and Collins that in the past sufficient time and attention had not been devoted by the Committee to the question of improving yields. The Vice-President had stated that there had been a big increase in yield over the last thirty years. He was not prepared to say that that increase was due to improvements by the Agricultural Departments. He did not think it required any special endeavour because when cotton growing paid the growers they worked harder to get better yields. He wished to suggest to the Departments of Agriculture that they should devote more time to increasing the yields of the cultivators' crops. India was much behind in the matter of yield compared with other countries. He considered it was in the interests of the cultivators that they should take up the cultivation of long staple cottons, but the spinners must pay a sufficient premium. The growers of 1027 were not getting a proper price and he considered the trade should pay this. The aim of the Indian Central Cotton Committee was to benefit the grower and therefore whatever kind of cotton the grower took up the Committee should see that he was fully compensated. He considered that the Indian mills should be self-contained and it wast he duty of the Committee to push those qualities which were now being imported, with this condition that the growers should get a proper premium. As a grower his only request was that the Committee should carry out experiments for yield and staple and should recommend those varieties which would benefit the growers most. Regarding complaints against the Cotton Ginning and Pressing Factories Act, it had been maintained by everybody that the quality of cotton must be preserved and all the research that had been carried out would bear no fruit if the Act was repealed as was suggested in certain of the notes received. On the whole the Committee had done satisfactory work although most of the research schemes had yet to bear fruit.

Mr. Burt said he thought the Committee was under a sense of obligation to those associations and individuals who had taken the trouble to reply to the Committee's request. There was a distinct contrast, he said, between these replies and those received by the Agricultural Departments ten years ago, because they showed an appreciation of our

work and contained some constructive criticisms for the future. When the Committee first received its funds it had to adopt a cautious policy and feel its way. At that time they were in a difficult position because they were a central body created just when provincialism was somewhat exaggerated and everyone suspicious of central direction and control. The Central Cotton Committee had definitely made up its mind not to try to direct policy but merely to give advice. There was a feeling at first amongst the provinces that, because it had funds, everything to do with cotton should be financed by the Committee and this had to be fought. Those dangers had now passed and he thought a broader policy was now permissible. The replies received indicated that on the whole the Committee should follow its past policy, viz., that it should tackle problems of more than provincial importance and that the primary responsibility rested with the provinces. A recent amplification of the Committee's policy was that it should exploit the result of successful research. This would prove very fruitful and he was very glad to see that two of the commercial bodies replying supported the United Provinces Pink Boll-worm scheme. There was one sentence in the reply of the Bombay Millowners' Association which, he considered, required comment. They had stated that as the Committee had been in existence for eight years, more results should have been shown. If they had only paused to con ider the length of time required for breeding work, they would have seen that eight years was far too short a period to get results. It was a matter of simple arithmetic. A breeding scheme started in 1924 would reach its eighth generation of the crop next year and this was the earliest period within which results could be expected. Where results had been obtained before this period, the Committee had reaped the benefit of previous work by the Agricultural Departments. He thought it was as well that people, and the Committee, should recognise frankly that if an improved cotton was obtained in eight years they were very lucky. Mr. Saklatvala had raised the question of cleaner picking. This had been before the Committee on a previous occasion and they had persuaded the East India Cotton Association to widen the "on" allowances. There were two methods of attacking the problem first by improving the marketing organisation, and secondly, by plant-breeding methods. Clean picking was entirely a matter of price. Two factors came into play. First, where the yield of the crop was low, for example in the Northerns and Kumpta areas, half or even the whole crop was allowed to mature before it was harvested and much of it had to be collected from the ground. Where yields were high, as in the Punjab, more frequent pickings were carried out. The second factor was the habits of the people. In certain parts the cotton was picked early in the morning before the dew was off the plant and the cotton came away quite clean. In other parts the pickers waited till about noon when the bracts were brittle and came off with the cotton. The solution in different parts of the country was not the same. He wanted to join issue with Mr. Vonesch regarding his statement that

cotton $\frac{7}{8}$" and over was long staple cotton. This was the case only in Bombay. In Liverpool the standard was $1\frac{1}{8}$". He thought the word medium staple should be used for cottons of intermediate staple. Several of the replies received showed the danger of over-saturation of the market with certain kinds of cotton. Very frequently agricultural officers thought that any increase in length of staple was an advantage, but this was not the case and small increases of length in short stapled cottons might only lead to further congestion in a crowded market. He considered that the Committee should again investigate this matter with the help of the trade so as to get an idea where the different cottons went and also what changes in demand had taken place and were likely to take place within the next few years. In order to take a long view the question of the trend of demand must be studied. India had at present a monopoly of $\frac{5}{8}$" cotton but was also largely dependent on one consumer. It was necessary to find out to what extent foreign consumers were likely to continue their demand for these short staple styles. The Committee had heard a great deal about long-range and short-range research. These phrases were coined not by a research worker but by an admnistrator and there was no real distinction between the two types. The real test in applied science was the aim of the work. The Committee had decided at an early stage that it would not take up research which would prove of academic interest only, but that all its schemes should have the economic end clearly in view. Though a particular problem might be difficult and likely to take a long time that was no reason why the Committee should fight shy of it. Such a course would be ill-advised. The question should be asked "Was this job worth doing ?" and if the answer was in the affirmative the task should be pursued with determination.

Mr. Boyagis said he made no apology for representing that much maligned body—the trader—who was considered the villain of the piece for mixing different kinds of cotton. The question of mixing different kinds of cottons depended entirely on the price paid. The Indian mills were blamed for not paying a sufficient price for improved cotton, but many other factors had to be taken into consideration. He agreed with Mr. Burt that cottons between $\frac{7}{8}$" and 1" should be called 'medium', and that the cotton produced in other countries would compete with those medium staple qualities. He agreed with Mr. Plymen that the Committee's policy should be framed in consultation with the consumer, and the Committee should base its policy on the replies received. He was dead against growing long staple cotton in short staple areas. He thought sufficient long staple cotton could be grown to satisfy Indian mill requirements if the Committee were to spend time in improving the quality of *Kumptas* and the qualities and quantities of the other types of cotton grown in Southern India. This would give the Committee ample work for a long time to come. There was no doubt that India could grow long staple cotton and with a crop of six million bales he thought India should be able to produce enough staple cotton for her own mills. In long staple cotton regions cottons of 40s to 80s

could be grown but only enough should be produced to satisfy her own mill requirements. He was very perturbed to read in the note that it was meant to replace the whole of Berar *Oomras* with *Verum* cotton. Never had he seen a glut of short staple cotton and at the present moment there was a distinct dearth of it. Regarding the Cotton Ginning and Pressing Factories Act, there seemed to be an idea amongst the public that the trade was against the Act as it was against their interests. He believed that the Cotton Transport Act could be used to prevent malpractices at the source, whereas all the Cotton Ginning and Pressing Factories Act was trying to do was to prevent them at the end. What the trade said was that the Act should be repealed if it could not be made to work satisfactorily. It should be tightened up and administered at its source by a system of licensing. In his experience many factories did not mark at all and it was asking too much of the trade to report all cases of faulty marking. Hyderabad *Gaorani* cotton on the whole had deteriorated very considerably in spinning quality during recent years. This used to be the best spinning cotton in India and he thought the Committee would do a wonderful piece of work if it was instrumental in bringing back its spinning qualities.

Mr. Haridas Madhovdas said he was speaking in his personal capacity. As far as cotton improvement was concerned he would like the Committee to concentrate on those areas only where long staple cottons were grown and to leave the short staple cotton alone so far as length of the staple was concerned. There was a distinct market for short staple and there was a big demand for the three million bales exported. If long staple cotton took the place of short staple, it would increase the quantity in the world's market and there would be a drop in price. Regarding legislative measures he was in entire sympathy with and approved of the Cotton Transport Act because it was helping to stop malpractices at the start and he considered it should be extended. In his opinion the Cotton Ginning and Pressing Factories Act was neither advantageous to the trade nor to the grower, and if malpractices were sought to be stopped other means should be adopted but not by a system of marking. When a bale was marked with the year in which it was pressed that in itself was sufficient to condemn it.

Mr. Collins said he was very much impressed with the Vice-President's speech and he thought the views of world authorities on the improvement that had taken place in Indian cotton should be taken to heart by the critics in this country, and he suggested that the speech should receive the widest publicity in India. He did not think the Committee had any cause for heart-searching as to whether it had done and was doing any good. He would like to endorse what Mr. Jenkins had said, viz., that the mere existence of the Committee had done a lot of good to Indian cotton. The mere fact of bringing together under the same roof members of the trade and the experts justified the existence of the Committee. Regarding the reported deterioration of Hyderabad cotton, it would be

seen that the Millowners' Association had qualified their remarks by saying that they referred to that portion of the crop which found its way to Bombay. He would like to ask Mr. Saklatvala if he had found any deterioration.

Mr. Saklatvala stated that there was no marked deterioration in the *Gaorani* cottons which they had used in their mills for years past.

Mr. Collins said that Mr. Saklatvala's firm took the greater part of the *Gaorani* crop which they themselves bought on the spot, ginned and pressed and no deterioration had taken place. The reason why the Bombay Millowners considered that there had been deterioration in "*Bani*" was that mills did not buy direct. He had received one complaint from a mill in Bombay regarding the weakness of *Bani* cotton and he took the trouble to make enquiries and found that though this mill had its own press it did not buy direct but through an agent, and it was shown that this agent was deliberately mixing the cotton. Very little *Gaorani* came to Bombay and what did come was adulterated. He said he wished to make a few suggestions, firstly regarding the Cotton Markets Act. He thought the Committee should do all it could to get this Act introduced all through India. Once Market Committees were formed in the different centres they themselves would take action to see that the reputation of their markets was kept up. Market Committees could and would do a great deal to stop mixing. Sceondly, the Committee should not give up its attempts to get licensing carried through. He was disappointed to see that no recommendation to this effect was contained in the report of the Local Sub-Committee on pools. He was very glad indeed to hear Mr. Boyagis say that licensing should be enforced. The three greatest defects in Indian cotton were mixing, watering and leafiness. The first two could be put a stop to immediately by licensing. They had been eminently successful in Hyderabad in stopping watering. It was very easy to know where watering was done. The Legislative Assembly and Provincial Councils were getting more and more growers on them and he thought that such legislation would have every chance of passing. He thought the Committee should try to frame a simple bill. He did not think there was any necessity to have a large corps of low paid inspectors. When complaints came in regarding malpractices action could be taken. He strongly supported the view that the licensing of gins and presses should be one of the main planks in the Committee's future policy. Regarding leafiness, it had been pointed out that one method of dealing with this defect was by plant breeding. Great differences between the different kinds of cotton could be seen in Nanded. The segments of the "*Hawri*" boll opened wide, with the result that it was very easy to pick clean. "*Bani*" had the bracteoles pressed close against the cotton and if it were bone dry the picker was compelled to take the leaf with it. He wished to lay great stress on the Committee undertaking work to ensure that the cotton could not but be picked clean, but he did not think this was enough. By introducing

an opener in Nanded one press was producing cotton free from leaf and dirt. They got several distinct advantages, viz., a saving in freight of about 10 per cent and a *Bani* which no one in the trade could recognise. He believed that if the Committee were to encourage experiments of this kind, a big step would be taken to popularise the better types of Indian cotton. In conclusion he hoped the Committee would decide to take up work to improve cultural methods as explained in his note* on the subject for it was essential to improve the yields obtained by the grower.

Mr. D. N. Mahta said he wished to associate himself with Mr. Burt's remarks regarding the function of long and short term research. The question which Mr. Plymen had asked had not been answered viz., whether long or short staple cotton should be grown in the Central Provinces and Berar. He wished to ask the trade members whether *Verum* was considered long or short staple cotton. *Verum* cotton was originally developed as a wilt-resistant variety which incidentally had a better staple. The growers had taken it up of their own accord as they found it paid them better to grow than their original varieties. One member had said *Verum* was not a cotton suitable to Berar. *Verum* cotton was indigenous to Berar and he failed to see therefore why it should not be suitable to the area from which it came. This year the climatic conditions had been so unsuitable that every cotton had been hard hit though perhaps *Verum* had suffered a little more. Improved varieties were always more delicate than unimproved ones. If *Verum* was given suitable cultural treatment it would continue to do well and would pay the grower. Recently they had been concentrating on certain defects in *Verum* and they had now got a variety which ginned better, gave a higher outturn and possessed a better opening habit. It took seven or eight years to produce a variety to replace another and he therefore wished to know from the Committee whether the work in the Central Provinces was being carried out in the right direction. Personally he was of opinion that *Verum* was wanted and would do well. They had also been concentrating on "*Bani*" and had evolved a strain capable of spinning 40s, but it was unlikely that this would compete with the other varieties because of its low ginning percentage. The yield of this strain was very good in certain restricted areas. He wished to know whether *Bani* was wanted. Some members of the Provincial Cotton Committee had said they wanted to grow *Roseum*. Should the Agricultural Department distribute *Roseum* seed and should its work in future be directed towards a short staple cotton ? The criticisms against *Verum* cotton were due mainly to mixing and partly to the fact that it had been grown in areas not quite suited to it.

Mr. Palairet said he did not wish to waste the time of the Committee with his views, but he felt tht he should say something because he was one of the members accused of criticism. He wished to thank the President, Vice-President and the Secretary for the way they had handled

* Not printed.

this question. He wished to know whether the schemes which the Committee were financing were being paid out of revenue or from capital.

The Secretary said that up to date they were being paid out of revenue but if all the new schemes went through, the Committee would have to sell out some of its securities to finance them.

Mr. Palairet said the Committee had about Rs. 31 lakhs in reserve and he would like to be assured that it would not refuse to sanction money for any promising scheme put forward. In the event of the Committee closing down, its funds would revert to Government and he did not see why it should be afraid to spend money as it did not need its reserves. He could not support Mr. Vonesch's suggestion to increase the cotton cess.

Mr. Saklatvala said the Committee had been blamed in some quarters for spending too much money and now was being blamed for not spending enough. It should not be forgotten that the Committee had certain commitments which had to be carried out for the period for which they were sanctioned. It would be fatal if they were dropped for want of funds. It would not be wise for the Committee to spend its balances because it should have sufficient reserve to enable schemes to be sanctioned for seven or even ten years if necessary. Regarding Mr. Vonesch's suggestion for an increase in the cess, he would strongly advise the Committee not to do this because the moment this was suggested the trade would immediately agitate to have it reduced to one anna.

Major Vanrenen said he felt that the cotton growers were not sufficiently represented on the Committee. Until he joined the Committee he had not appreciated the value of the work being done for the growers, but now he knew that the Committee had done and was doing important work in their behalf. He was disappointed to see that the Committee had not been able to do anything to prevent the mixing of cotton. The Bombay Millowners' Association had pointed out that the Punjab-American crop had definitely deteriorated due to mixing. The Cotton Transport Act was not sufficient to prevent this because in the same area they grew more than one variety. *Mollisoni* was of particular value because it was easier to mix. He did not think this Committee would achieve much in this direction unless the licensing of gins and presses was made compulsory. All work on research would be wasted unless adulteration and mixing of cotton were put a stop to. Mills in Bombay were anxious to spin finer counts and as that was their policy the Committee should follow it. However, it was the greatest disappointment to him that the mill industry had adopted this policy as he considered it against the interests of the grower. He was very doubtful if India could produce staple cottons of long enough staple to satisfy the industry.

Rao Bahadur M. G. Deshpande said he had been a member of the Committee for five years and he knew what sort of help had been given to all

the Agricultural Departments in the country. He wished to say that *Verum* cotton would not have been possible without help from the Committee. He could not understand the opposition of certain speakers to *Verum* cotton. Why did they object to it ? *Verum* was introduced to fight *wilt* disease and had been very successful in this, while in addition it was found to be a very desirable cotton from the spinning point of view. "*Bani*" cotton used to be grown generally over Berar and was given up because of its small yield. He thought something should be done to revive it. There was a criticism against the Committee that it had done nothing for the growers, but he did not agree. He considered that the Committee could be of considerable help to the growers by encouraging sale societies on the lines of those in Gadag and Hubli. This year the Central Provinces Agricultural Department had tried to form a pool in order to market *Verum* cotton, but owing to the extra-ordinary rates for *Oomras*, no premium was being paid for *Verum* and nothing was coming into the pool. Some such sale organisation would be of great assistance in getting a good premium for good cotton.

Mr. Y. G. Deshpande said he had an idealistic scheme. He recommended to the Committee a book called "Agriculture in Soviet Russia" which he suggested the Committee should take as an example. He wished to support Mr. Vonesch that the cess should be increased. What he found was that small strips of land were being cultivated by growers and on these small strips improved cotton could not be grown. He considered that funds should be provided either by the State or by the Committee to encourage the introduction and growth of improved varieties. The small cultivators did not grow *Verum* cotton, while the big growers did. Regarding the merits of *Verum* cotton, he himself was paying Rs. 50 a *candy* on *Broach* for it. Last year he used much of it in his mill. The mills in the Central Provinces wanted it and they would press the Agricultural Department to grow it. They had the growers' interests more at heart than the Trade had. Another point he wished to emphasise was that if better varieties were required the cultivator must have better implements. They were still using the ordinary wooden ploughs and though he knew that the iron plough was being taken up, he wanted it taken up on a more extensive scale. The cultivator must be taught to take to improved methods. Several methods had been suggested for improving the Indian crop, for example, licensing ginning and pressing factories, etc., but in his opinion these were half-hearted methods. It had been said that the Indian climate and soil were suitable only for short staple cotton and he was very surprised to hear that Ahmedabad was using imported cotton to spin finer counts. He was of opinion that the Millowners to promote the interests of Indian cotton growers, who were also the largest consumers, should spin such counts as could be spun out of Indian cotton alone and those consumers accustomed to use finer cloth should and would be pursuaded to change their tastes and use cloth manufactured out of Indian cotton even if it were a little coarser. He was very glad to see that the Government of India had put on a duty

of half anna per lb. on imported cotton. He would like to see the duty raised to Re. 1 per lb. If the Indian mills did not spin cloth from Indian cotton, they were neglecting the Indian grower. India produced cotton sufficient to supply the whole of her population and the mills should manufacture cloth only from Indian cotton. If they were really patriotic, the first thing they would do was to refuse to import any forign cotton.

Mr. Kotak said the Committee had devoted much attention to improving staple cotton and had neglected short staple cottons. This year short staple cotton was exceeding the price of long staple cotton and he suggested that the present short staple tracts should be safeguarded and efforts made to increase the yield. Complaints were frequently received regarding the amount of cut and crushed seeds in Indian cotton. He thought the Committee might do something to see that more care was taken in the ginning factories.

The Vice-President said there was such a diversity of views that it was impossible to summarise them in the short time he wished to take up. When Mr. Deshpande recommended a book on "Agriculture in Soviet Russia," did he seriously expect the Committee to follow it? He did not think that was the type of work which would appeal to any one who had the interests of the cultivator at heart. Everything done in Russia spoke for retrogression; the growers were not paid in cash but in kind. In reply to Major Vanrenen he said that Indian mills should be left to frame their own policy as the millowners were quite capable of deciding whether they should go in for finer counts or not. The policy behind this Committee was the grower. The trade could take care of itself. The real question was "what lines were we to follow?" It would be seen, he said, from the replies received and also from the discussion that the policy the Committee laid down eight years ago had not been far wrong, and if it continued in the same way he thought it would have reason to compliment itself. A great deal had been said of *Verum* cotton. It had to be remembered that the *Roseum* type of cotton was rapidly replacing the indigenous cottons of the Central Provinces and Berar and *Verum* was simply taking the place of *Roseum*. He considered it ought to be developed to its fullest extent. In his opinion the policy that should be followed was that the natural advantages of each tract should be developed to their fullest extent. Other suggestions were that prizes should be given for better picking, etc., and also that the Committee should consult the trade so that the Agricultural Departments might be told what the requirements were likely to be. Two decidedly different views were expressed regarding long and short staple cottons. There was no doubt that as the world was progressing their was an increasing demand for finer cloth, but in his opinion there always would be a demand for short staple cottons. With that before it he thought the Com-Committee was quite safe in increasing the production of long staple cotton but that efforts should be made to increase the yields of short

staple varieties. He thought it was a good idea that the Committee should get the trade together to find out what developments in spinning were likely in the near future. This was a piece of work which would be of great importance and would be a guide to future policy. He was very glad to hear from Mr. Boyagis that he approved of the licensing of gins and presses. Some years ago Mr. Burt had put forward proposals but they lacked support amongst the Committee itself. There was now a distinct feeling that if we could get licensing all these malpractices would cease. No definite reslution could be framed and he suggested that the next meeting should take up the points decided on.

This was agreed to.

SUBJECT 17.—**Technological Research—Progress Report of the Director, Technological Laboratory.**

The Director's Progress Report* was considered.

Sir Joseph Kay proposed and **Mr. Milne** seconded the following resolution which was passed unanimously :—

RESOLUTION 13.—"That the Progress Report of the Director, Technological Laboratory, be adopted."

SUBJECT 18.—**Technological Research—Report** of the Technological Research Sub-Committee.**

Sir Joseph Kay proposed the following resolution which was seconded by **Sheth Naranlal Jivanlal** and carried unanimously :—

RESOLUTION 14.—"That the Report of the Technological Research Sub-Committee be approved."

SUBJECT 19.—**Agricultural Research—Report§ of the Agricultural Research Sub-Committee.**

Sir Joseph Kay proposed and **Mr. Burt** seconded the following resolution which was carried subject to amendments in the light of the discussion to para 21 of the Report of the Agricultural Research Sub-Committee :—

RESOLUTION 15.—"That the report of the Agricultural Research Sub-Committee be adopted."

Summary of discussion.

A long discussion took place on the merits of the proposed United Provinces Pink Boll-worm Extension Scheme—Para 21 of the Report. Several members were doubtful if the scheme could be made a success as it depended entirely on the co-operation of factoryowners. Others

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* Appendix XIII (Page 64). ** Appendix XIV (Page 71).
§ Appendix XV (Page 75).

were inclined to question the feasibility of sunning all stocks of seed in the villages so as to destroy all the contained *larvae*. Others considered that more details of the actual cost of the machinery, etc., required should be provided. In the end the Committee gave its approval to the principle of the scheme but decided that the Special Sub-Committee mentioned in the Report should, after negotiation with the United Provinces Government and trade interests, place a full report before the next meeting of the Indian Central Cotton Committee to enable it to come to a decision regarding the scheme.

SUBJECT 20.—**Institute of Plant Industry, Indore—**
***Policy to be followed.**

Summary of discussion.

Discussion on this subject centred round the amount of research work that had been carried on at Indore. The Institute is peculiarly placed in this respect that it obtains its funds from two sources, viz., the Central Cotton Committee and the contributing States of Central India and Rajputana. The latter are more concerned with the general agronomy of cotton and other crops, while the Committee's funds were provided to enable Indore to become a Central Research Institute for cotton problems. In the past much more prominence has been given to the former branch of the work and not enough to research. The newly appointed Director will put before the Agricultural Research Sub-Committee new proposals for work and staff.

SUBJECT 21.—**Report** of the Standing Finance Sub-Committee.**

(a) **Balance Sheet.**

(b) **Financial Statement.**

(c) **Revised Estimates—1931-32.**

(d) **Budget, 1932-33.**

(e) **Auditors' Fees.**

Sir Joseph Kay proposed and **Mr. McCallum** seconded the following resolution which was passed unanimously :—

RESOLUTION 17.—"That the Report of the Standing Finance Sub-Committee be adopted."

"That the Revised Estimates for 1931-32 be adopted."

"That the Budget for 1932-33 as amended be sanctioned."

SUBJECT 22.—**Provincial Cotton Committees—Abolition of the United Provinces Provincial Cotton Committee—**
@Note by Secretary.

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* Appendix XVI (Page 78). ** Appendix XVII (Page 81).
@ Appendix XVIII (Page 93).

Mr. Burt proposed the following resolution, which was seconded by Rao Bahadur M. G. Deshpande and passed uanimously :—

RESOLUTION 18.—"That the Central Cotton Committee, while being thoroughly appreciative of the work which some Provincial Cotton Committees have accomplished, feels that sufficient use is not made of these local advisory bodies and recommends that they should be more closely associated with all matters connected with grants from the Committee. The Central Cotton Committee further deplores the action of the United Provinces Government in failing to re-constitute the United Provinces Provincial Cotton Committee but trusts this will last only for the period of the financial stringency."

SUBJECT 23.—**Representation* of Sind cotton growers on the Indian Central Cotton Committee.**

Rao Bahadur Bhimbhai Ranchodji Naik proposed and Mr. Chunilal B. Mehta seconded the following resolution which was passed unanimously :—

RESOLUTION 19.—"That the Governor-General in Council be asked to nominate an additional member to represent the cotton growers of Sind."

SUBJECT 24.—**Cotton Statistics—Comparison@ of Cotton Press Returns with Cotton Forecasts.**

The President proposed and Mr. Jenkins seconded the following resolution which was passed unanimously :—

RESOLUTION 20.—"That Directors of Agriculture and others responsible for the preparation of cotton forecasts be asked to continue their co-operation in investigating the discrepancies pointed out in the Secretary's note between the forecasted crop and the press returns in the Provinces and Indian States with a view to obtaining greater accuracy in the cotton forecasts."

SUBJECT 25.—**Cotton Statistics—Publication of All-India Cotton Forecasts by the Committee.**

The Secretary's note† was recorded.

SUBJECT 26.—**Cotton Statistics—Raw cotton trade statistics—Internal trade blocks—Separation of Kathiawar from Gujerat—††Reply from the Government of India.**

Mr. Main proposed and Mr. Milne seconded the following resolution which was passed unanimously :—

RESOLUTION 21.—"The Central Cotton Committee desires to thank the Government of India for agreeing to its request to separate the

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* Appendix XIX (Page 95).
@ Appendix XX (Page 95).
† Appendix XXI (Page 122).
†† Appendix XXII (Page 122).

Kathiawar States from the Gujerat Trade Block for the purpose of compiling the Raw Cotton Trade Statistics."

SUBJECT 27.—**Fumigation of American Cotton—Letter from the Government of India.**

The Secretary's note† was recorded.

SUBJECT 28.—**Merging†† of the Committee's funds into Provincial Revenues—Reply from the Government of India.**

The President proposed the following resolution which was seconded by **Mr. Vonesch** and carried unanimously :—

RESOLUTION 22.—"That the Central Cotton Committee thanks the Government of India for making arrangements to keep separate from Provincial Revenues the funds of the Central Cotton Committee.

SUBJECT 29.—**Importation of foreign cotton seed.**

The Secretary's note* was recorded.

SUBJECT 30.—**Investigation into the cost of growing cotton in India—**Reply from the Imperial Council of Agricultural Research.**

The Committee agreed to provide in its Budget a sum of Rs. 10,000 for preliminary expenses in connection with the scheme proposed by Mr. Burt which was approved. Power to nominate representatives from the Central Cotton Committee on the Joint Sub-Committee to work out details and guide the investigation was delegated to the Standing Finance Sub-Committee.

SUBJECT 31.—*****Annual Report of the Dhulia Cotton Market for the year 1930-31.**

Rao Bahadur Bhimbhai Ranchodji Naik proposed the following resolution which was seconded by **Mr. Kolhe** and carried unanimously:—

RESOLUTION 23.—"The Central Cotton Committee has read with considerable pleasure the first report on the working of the Dhulia Cotton Market and suggests to the Bombay Government that a copy should be sent to every District Local Board and Municipality in the Presidency interested in cotton with a view to acquainting them with the successful establishment of a market run in the interests of the grower."

SUBJECT 32.—**Investigations into finance and marketing of cultivators' cotton—Report of the Registrar, Co-operative Societies, Bombay Presidency, regarding formation of Co-operative Sale Societies in Sind.**

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† Appendix XXIII (Page 122). †† Appendix XXIV (Page 123).
* Appendix XXV (Page 123). ** Appendix XXVI (Page 123).
*** Appendix XXVII (Page 126).

The correspondence@ was recorded.

SUBJECT 33.—**Export Duty† on raw cotton in Bombay.**

The President proposed and Mr. Plymen seconded the following resolution which was carried unanimously:—

RESOLUTION 24.—"The Central Cotton Committee wishes to denounce the proposal passed by the Bombay Municipal Corporation to impose a cess of four annas per bale on all cotton exported from Bombay, as this cess will fall on the grower who will receive less for his produce. The Central Cotton Committee trusts the Bombay Government will refuse sanction to the proposal in the interests not only of the growers in the Presidency but of those in other parts of India."

SUBJECT 34.—**Provincial Cotton Committees—Proceedings of the Central Provinces Provincial Cotton Committee.**

The Secretary's *note and minutes of the meeting of the Provincial Cotton Committee of the Central Provinces and Berar were recorded.

SUBJECT 35.—**Re-use of old hoops.**

The Secretary's note** and enclosures were considered and it was decided to refer the subject back to the Local Sub-Committee or to the Cotton Ginning and Pressing Factories Sub-Committee.

SUBJECT 36.—**Baling of cotton with cotton material—Letter from the International Federation of Master Cotton Spinners' and Manufacturers' Associations.**

The correspondence*** was recorded.

With a vote of thanks to the Chair, proposed by Sir Joseph Kay, the session concluded.

J. H. RITCHIE.

@ Appendix XXVIII (Page 131). † Appendix XXIX (Page 132).

* Appendix XXX (Page 132). ** Appendix XXXI (Page 137).

*** Appendix XXXII (Page 141).

No.	RESOLUTIONS.	Page.
	Appointment of Vice-President.	
1	"That Sir Joseph A. Kay be appointed Vice-President of the Committee for the year 1932-33"	11
	Standing Finance Sub-Committee.	
2	"That the following members be appointed to form the Standing Finance Sub-Committee for the financial year 1932-33 :—	
	Sir Joseph A. Kay (Vice-President).	
	Dewan Bahadur Sir T. Vijayaraghacharya, (ex-officio) ..	
	Sir Purshotamdas Thakurdas, ...	
	Mr. S. D. Saklatvala,	
	Rao Bahadur Bhimbhai Ranchodji Naik,	
	Mr. J. Vonesch,	
	Rao Bahadur M. G. Deshpande,	
	Mr. D. McCallum,	
	Mr. Chunilal B. Mehta"	11
	Cotton Ginning and Pressing Factories Sub-Committee.	
3	"That the following members be appointed to form the Cotton Ginning and Pressing Factories Sub-Committee :—	
	Sir Joseph A. Kay (Vice-President),	
	Sir Purshotamdas Thakurdas,	
	Mr. S. D. Saklatvala,	
	Mr. D. McCallum,	
	Mr. J. Vonesch,	
	Mr. Chunilal B. Mehta,	
	Mr. W. Roberts,	
	Mr. H. B. Moore,	
	Mr. J. Tinker,	
	Mr. Y. G. Deshpande,	
	Sardar Sampuran Singh"	11

No. RESOLUTIONS—(*Contd.*) Page.

Local Sub-Committee.

4 "That the following members be appointed to compose the Local Sub-Committee:—
Sir Joseph A. Kay (Vice-President),
Dewan Bahadur Sir T. Vijayaraghavacharya,
Sir Purshotamdas Thakurdas,
Mr. S. D. Saklatvala,
Rao Bahadur Bhimbhai Ranchodji Naik,
Mr. J. Vonesch,
Rao Bahadur M. G. Deshpande,
Mr. D. McCallum,
Mr. Chunilal B. Mehta" 12

Agricultural Research Sub-Committee.

5 "That the following members be appointed to form the Agricultural Research Sub-Committee :—

I. Ex-Officio—Dewan Bahadur Sir T. Vijayaragha vacharya,

II. The Vice-President—Sir Joseph A. Kay,

III. The Director, Institute of Plant Industry, Indore—Mr. F. K. Jackson,

IV. Co-operative representative—Sardar Sampuran Singh,

V. Cotton growers' representative—Mr. W. Roberts,

VI. Cotton Trade representative—Sir Purshotamdas Thakurdas,

VII. Four Agricultural Officers—Mr. T. F. Main,
Mr. F. J. Plymen,
Mr. D. Milne,
Mr. V. Ramanatha Iyer.

VIII. Additional members—Mr. B. C. Burt,
Dr. L. C. Coleman,
Dr. W. Burns,
Mr. D. N. Mahta,
Mr. Ram Prasad,
Mr. H. H. Pandya,
Mr. W. J. Jenkins,
Mr. P. B. Richards,
Mr. B. A. Collins,
Mr. D. G. Munro,
Mr. C. V. Sane

No.	RESOLUTIONS—(*Contd.*)	Page.
IX.	Co-opted member—Successor to Mr. Trevor Trought,	
X.	The Secretary	12

Technological Research Sub-Committee.

6 "That the following members form the Technological Research Sub-Committee:—

The President,
The Vice-President, } ex-officio.
Mr. S. D. Saklatvala,
Mr. B. C. Burt,
Mr. D. Milne,
Mr. T. F. Main,
Mr. Chunilal B. Mehta,
Mr. Y. G. Deshpande,
Sheth Naranlal Jivanlal.

The Bombay Millowners' Association, the Ahmedabad Millowners' Association and the East India Cotton Association will be asked to nominate two representatives each" 13

Research Students Selection Sub-Committee.

7 "That the Research Students Selection Sub-Committee be composed of the following members:—

The President,
The Vice-President,
Sir Purshotamdas Thakurdas,
Mr. S. D. Saklatvala,
Mr. B. C. Burt,
Dr. W. Burns,
Mr. P. B. Richards,
Mr. D. Milne,
Mr. F. J. Plymen,
Dr. L. C. Coleman,
Mr. H. H. Pandya,
Mr. T. F. Main,
Mr. W. J. Jenkins,
Mr. C. V. Sane,
Mr. F. K. Jackson,
Dr. Nazir Ahmad" 14

No.	RESOLUTIONS. —(*Contd.*)	Page.
	Sub-Committee on Malpractices.	
8	"That the Sub-Committee on Malpractices consist of the following members :— The Vice-President, Mr. S. D. Saklatvala, Sir Purshotamdas Thakurdas, Mr. D. McCallum, Mr. Chunilal B. Mehta, Mr. T. F. Main, Rao Bahadur Bhimbhai Ranchodji Naik, with power to co-opt"	14
	Central Provinces Cotton Market Bill.	
9	"The Central Cotton Committee approves in principle of the draft bill which has been introduced by a private member into the Central Provinces Legislative Council for supplying the Central Provinces with organised cotton markets on the lines of those in Berar."	15
	Madras Cotton Control Bill.	
10	"The Central Cotton Committee approves of the action taken by the Local Sub-Committee in recommending to the Madras Government less drastic legislation under the Madras Cotton Control Bill provided that the scope of the Bill is restricted to the growing of Pulichai cotton in the Tinnevelly area"	16
	Cotton ginning and pressing factories pools.	
11	"That the Report of the Local Sub-Committee on pools of cotton ginning and pressing factories be adopted".. ..	16
	Publicity and propaganda.	
12	"That the Report of the Local Sub-Committee on the replies received from Provincial Directors of Agriculture on publicity and propaganda be adopted"	17
	Progress Report of the Director, Technological Laboratory.	
13	"That the Progress Report of the Director, Technological Laboratory, be adopted"	35
	Report of the Technological Research Sub-Committee.	
14	"That the Report of the Technological Research Sub-Committee be approved"	35

No.	RESOLUTIONS.—(*Contd*).	Page.
	Report of the Agricultural Research Sub-Committee.	
15	"That the report of the Agricultural Research Sub-Committee be adopted"	35
	Investigation into the cost of production of cotton.	
16	"That a sum amounting to Rs. 10,000 be provided in ~~this~~ next year's budget for the initial expenses of an investigation into the cost of production of cotton and rotation crops".	
	Report of the Standing Finance Sub-Committee.	
17	"That the report of the Standing Finance-Sub-Committee be adopted".	
	"That the Revised Estimates for 1931-32 be adopted."	
	"That the Budget for 1932-33 as amended be sanctioned" ..	36
	Provincial Cotton Committees.	
18	"That the Central Cotton Committee, while being thoroughly appreciative of the work which some Provincial Cotton Committees have accomplished, feels that sufficient use is not made of these local advisory bodies and recommends that they should be more closely associated with all matters connected with grants from the Committee. The Central Cotton Committee further deplores the action of the United Provinces Government in failing to re-constitute the United Provinces Provincial Cotton Committee but trusts this will last only for the period of the financial stringency" ..	37
	Representation of Sind cotton growers on the Committee.	
19	"That the Governor General in Council be asked to nominate an additional member to represent the cotton growers of Sind"	37
	Comparison of Cotton Press Returns with Cotton Forecasts.	
20	"That Directors of Agriculture and others responsible for the preparation of cotton forecasts be asked to continue their co-operation in investigating the discrepancies pointed out in the Secretary's note between the forecasted crop and the press returns in the Provinces and Indian States with a view to obtaining greater accuracy in the cotton forecasts."	37

No. **RESOLUTIONS**—(*Concld.*). Page.

Raw cotton trade statistics—Separation of the Kathiawar States from the Gujerat Trade Block.

21 "The Central Cotton Committee desires to thank the Government of India for agreeing to its request to separate the Kathiawar States from the Gujerat Trade Block for the purpose of compiling the Raw Cotton Trade Statistics" .. 37

Merging of the Committee's funds into Provincial Revenues.

22 "That the Central Cotton Committee thanks the Government of India for making arrangements to keep separate from Provincial Revenues the funds of the Central Cotton Committee" 38

Annual Report of the Dhulia Cotton Market.

23 "The Central Cotton Committee has read with considerable pleasure the first report on the working of the Dhulia Cotton Market and suggests to the Bombay Government that a copy should be sent to every District Local Board and Municipality in the Presidency interested in cotton with a view to acquainting them with the successful establishment of a market run in the interests of the grower" .. 38

Export Duty on raw cotton in Bombay.

24 "The Central Cotton Committee wishes to denounce the proposal passed by the Bombay Municipal Corporation to impose a cess of four annas per bale on all cotton exported from Bombay, as this cess will fall on the grower who will receive less for his produce. The Central Cotton Committee trusts the Bombay Government will refuse sanction to the proposal in the interests not only of the growers in the Presidency but of those in other parts of India" 39

APPENDIX I.

SUBJECT 3.—*Retirement of members by rotation.*

Secretary's Note.

Under Rule 3 of the Indian Cotton Cess Rules, the following members retire on completion of their three-year term of membership :—

(1)	The representative of the Punjab Agricultural Department.	The Director of Agriculture, Punjab.
(2)	The representative of the Bombay Chamber of Commerce.	Sir Joseph A. Kay (*vice* Mr. T. G. Ralli)
(3)	The representative of the Tuticorin Chamber of Commerce.	Mr. J. Vonesch.
(4)	The representative of the Upper India Chamber of Commerce.	Mr. J. Tinker (*vice* Mr. H. A. Wilkinson).
(5)	The Commercial representative of Bengal.	Mr. Girija Prasanna Chakravarty.
(6)	One representative of the Madras cotton growers.	M. R. Ry. K. Sarabha Reddi Garu.
(7)	The representative of the United Provinces cotton growers.	Rao Bahadur Rao Bikram Sinha.
(8)	Do. do. do.	Rai Bahadur M. Amba Prasad.
(9)	The representative of the Baroda State	Mr. C. V. Sane.
(10)	One representative of the Bombay cotton growers.	Rao Saheb C. S. Shirahatti.
(11)	One representative of the Punjab cotton growers.	Sardar Ujjal Singh.
(12)	Additional member under Section 4 (*xi*) of the Indian Cotton Cess Act.	Mr. C. R. Palairet.
(13)	Do. do. do.	Mr. W. J. Jenkins (*vice* Mr. K. I. Thadani).

All retiring members are eligible for renomination. The necessary notices will be sent to the nominating bodies in February 1932.

APPENDIX II.

SUBJECT 4.—*Appointment of Vice-President and Sub-Committees.*

Secretary's Note.

A. *Vice-President.*—Under Rule 4 (*a*) of the Indian Cotton Cess Rules, the Committee is required to elect a member, for the time being resident in Bombay, to be Vice-President for the twelve months commencing on April 1st, 1932.

B. *Sub-Committees.*

(1) *Standing Finance Sub-Committee.*—This Sub-Committee is a statutory Sub-Committee, appointed to hold office for twelve months from April 1st. It shall consist of nine members including the President and Vice-President who shall be ex-officio members; the Vice-President shall be the ex-officio Chairman of the Sub-Committee. In accordance with a resolution passed at the 5th meeting of the Committee, one member of the

Standing Finance Sub-Committee shall be a cotton growers' representative. The present members are :—

Sir T. Vijayaraghavacharya,
Sir Joseph A. Kay (Chairman), } *ex-officio.*

Sir Purshotamdas Thakurdas,

Mr. S. D. Saklatvala,

Mr. D. McCallum,

Mr. J. Vonesch,

Rao Bahadur M. G. Deshpande,

Rao Bahadur B. R. Naik (Cotton growers' representative).

One seat on this Sub-Committee remains unfilled.

Two members of this Sub-Committee, viz., Sir Joseph A. Kay and Mr. J. Vonesch, will retire in March 1932 and if they are now re-elected to the Sub-Committee but are not re-nominated to the Committee in March next, it will be necessary for the Sub-Committee to fill the vacancies at a later date.

(2) *Cotton Ginning and Pressing Factories Sub-Committee.*—This is also a statutory Sub-Committee, appointed by the Committee to hold office for twelve months from April 1st. The constitution of the Sub-Committee and the present members are as follows :—

(*a*) The Vice-President (Sir Joseph A. Kay) *ex-officio.*

(*b*) *Five trade members resident in Bombay Presidency :—*

Messrs. Saklatvala, McCallum and Vonesch, and two seats vacant caused by resignation of Mr. W. Ellis Jones and Sir Purshotamdas Thakurdas.

(*c*) *One trade member from each of the following provinces :—*

Madras .. .. Mr. H. B. Moore ;
Punjab .. .. Mr. W. Roberts ;
United Provinces .. .. .. Mr. J. Tinker ;
Central Provinces and Berar .. .. Vacant —(Sir Sorabji B. Mehta's place).

(*d*) *The Co-operative representative*—Sardar Sampuran Singh—*ex-officio.*

The above three vacancies were not filled as the Sub-Committee did not meet during the year.

Five trade members resident in Bombay and *four* provincial trade members have to be appointed.

(*3*) *Local Sub-Committee.*—This is not a statutory Sub-Committee but is composed of local members or those within easy reach of Bombay. The present members are :—

Sir Joseph A. Kay (*Vice-President*),

Sir Purshotamdas Thakurdas,

Mr. S. D. Saklatvala,

Mr. J. Vonesch,
Mr. C. V. Sane,

Major D. Vanrenen,

Mr. M. P. Kolhe,

Rao Bahadur Bhimbhai R. Naik,

Mr. D. McCallum.

There are two vacancies on this Sub-Committee caused by new representatives coming to the Committee from the Indian Merchants' Chamber, Bombay, and the Ahmedabad Millowners' Association.

(*4*) *Agricultural Research Sub-Committee.*—The constitution of this Sub-Committee was laid down at the 10th meeting of the Indian Central Cotton Committee. The present membership is as follows :—

(*i*)	President	Sir T. Vijayaraghavacharya.
(*ii*)	Vice-President	Sir Joseph A. Kay.
(*iii*)	Director, Institute of Plant Industry, Indore	Mr. F. K. Jackson.
(*iv*)	Co-operative representative ..	Sardar Sampuran Singh.
(*v*)	One cotton growers' representative	Mr. W. Roberts.
(*vi*)	One cotton trade representative ..	Vacant—caused by resignation of Mr. W. Ellis Jones.
(*vii*)	Four Agricultural officers	Mr. T. F. Main, Mr. F. J. Plymen, Mr. D. Milne, Mr. V. Ramanatha Iyer (co-opted in place of Mr. Hilson).
(*viii*)	Additional members	Mr. B. C. Burt, Dr. L. C. Coleman, Dr. W. Burns, Mr. D. N. Mahta, Mr. Ram Prasad, Mr. H. H. Pandya, Mr. W. J. Jenkins, Mr. P. B. Richards.
(*ix*)	Co-opted member	Vacant—Mr. Trevor Trought's place.
(*x*)	The Secretary.	

In addition to the above, the following members were co-opted at the July 1931 meeting of the Agricultural Research Sub-Committee:—

Mr. Chunilal B. Mehta,
Mr. C. V. Sane,
Sheth Naranlal Jivanlal,
Mr. V. Ramanatha Iyer (referred to under item (*vii*) above).

Nos. (*i*), (*ii*), (*iii*) and (*iv*) above are members *ex-officio*. Membership under (*v*), (*vi*), (*vii*) and (*viii*) has to be filled.

(*5*) *Technological Research Sub-Committee.*—The present members of the Sub-Committee are :—

The President—Sir T. Vijayaraghavacharya, } *ex-officio.*
The Vice-President—Sir Joseph A. Kay, }
Mr. S. D. Saklatvala,
Mr. D. Milne,
Mr. B. C. Burt,
Mr. T. F. Main,
Mr. Chunilal B. Mehta, }
Mr. Y. G. Deshpande, } Co-opted at the July 1931 meeting of Technological Research Sub-Committee.
Sheth Naranlal Jivanlal, }
The Secretary.

Co-opted members :—

Sir Manmohandas Ramji Mr. F. Stones	Representatives of the Bombay Mill-owners' Association.
Seth Chamanlal G. Parekh Sir Chinubhai Madhavlal	Representatives of the Ahmedabad Mill-owners' Association.
Mr. Bhaidas Nanalal Mr. R. G. Saraiya	Representatives of the East India Cotton Association.

There are two vacancies on this Sub-Committee caused by the resignation of Messrs. W. Ellis Jones and G. R. Hilson.

(6) *Research Students Selection Sub-Committee.*—The composition of this Sub-Committee was laid down at the 5th meeting of the Committee to be all provincial agricultural representatives, the Directors of Agriculture of Indian States, who are members of the Committee, the President and the Vice-President. The present Sub-Committee consists of :—

The President—Sir T. Vijayaraghavacharya,

The Vice-President—Sir Joseph A. Kay,

Mr. S. D. Saklatvala,

Mr. B. C. Burt,

Dr. W. Burns,

Mr. P. B. Richards,

Mr. D. Milne,

Mr. F. J. Plymen,

Dr. L. C. Coleman,

Mr. H. H. Pandya,

Mr. T. F. Main,

Mr. W. J. Jenkins,

Dr. Nazir Ahmad and

Mr. F. K. Jackson.

There are four vacancies on this Sub-Committee caused by the resignation of Sir Sorabji B. Mehta, Mr. G. R. Hilson, Dr. V. N. Likhite and Sir Purshotamdas Thakurdas.

(7) *Sub-Committee on Malpractices.*—This Sub-Committee was formed at the 19th meeting of the Committee in July 1929 and is composed of the Vice-President and six members of the Committee with powers to co-opt additional members representative of different sections of the cotton industry in India, whether members of the Indian Central Cotton Committee or not. The present members are :—

Sir Joseph A. Kay (Vice-President),

Mr. S. D. Saklatvala,

Mr. D. McCallum,

Mr. T. F. Main and

Rao Bahadur Bhimbhai R. Naik.

There are two vacancies on this Sub-Committee caused by the resignation of Mr. W. Ellis Jones and owing to the fact that Sir Purshotamdas Thakurdas' place was not filled when he retired in March 1931.

APPENDIX III.

SUBJECT 5.—*Cotton Transport Act—Madras.*

Secretary's Note.

The following note on the working of the Cotton Transport Act in Madras Presidency has been received from the Director of Agriculture, Madras. When this subject was discussed last December, Mr. Hilson said he thought it best to leave the matter alone until the trade asked for action to be taken. The intention of the Agricultural Department was to cover part of the area with *Cambodia* under irrigation and the rest with *Karunganni*. He thought it would be necessary to protect the Tinnevelly area at a later date. No action appears to be necessary by the Committee at this juncture.

THE WORKING OF THE COTTON TRANSPORT ACT, DURING 1930-31.

The Cotton Transport Act of 1923 was put into effect in 1925 in the Madras Presidency and has been in force since then. There are now two protected areas, viz.,(1) the Southerns tract comprising the 11 districts of Chingleput, South Arcot, Chittoor, North Arcot, Salem, Coimbatore, Trichinopoly, Tanjore, Madura, Ramnad, and Tinnevelly, and (2) the Northerns and Westerns tract comprising the four districts of Kurnool, Bellary, Anantapur and Cuddapah. There is, however, no restriction on (1) the import of cotton seed and (2) the import of cotton of any kind by road and river into these districts.

2. *Northerns and Westerns Tract.*—As in the past, the operation of the Act has effectively checked the importation into this tract of Cocandas cotton. *Kapas* and ginned cotton continued, however, to come in by road across the Tungabhadra river from H. E. H. the Nizam's Dominions. This import was only about half of that in the previous year, being estimated at 5,000 bales at Adoni, 2,500 at Bellary, and 1,200 bales at Kurnool. The decline in imports is mainly due to the low price of cotton. About 45 tons of seed were imported this year mostly for sowing from Gadag side mainly into Nandyal.

Southerns Tract.—The import of cotton from the Central Provinces into this tract has been effectively checked. Complaints were received that the merchants of Tiruppur carted Mysore *kapas* from Bangalore to Hosur and then railed it to Tiruppur with a view to mix it with *Cambodia*, heavy contracts having been made by dealers with firms for second crop *Cambodia*, the supply of which ran short. Enquiries show that such consignment from Hosur to Tiruppur in December 1930 and January 1931 amounted to about 2,250 Imperial Maunds of 82 2/7 lbs. It is also reported that *Pulichai* cotton seed was imported into parts of Ramnad and Tinnevelly for sowing. The question of controlling the growth of this cotton in the South is under the consideration of the Government.

The Southerns tract is extensive and has facilities to grow and exchange all varieties of cotton both inferior and superior. For example, merchants at Virudhunagar get by railway without restriction the poor variety of Nadam-Bourbon *kapas* from the Trichinopoly district and mix it with good *Cambodia kapas*, got from the neighbourhood of Dindigul and Ayalur. It is obvious that the amalgamation of the Tiruppur and Tinnevelly areas has therefore reduced considerably the benefits that should have accrued from the working of the Act.

APPENDIX IV.

SUBJECT 6.—*Cotton Transport Act—Indore—Railway Stations within the protected area.*

Secretary's Note.

The notification and the Rules under the Indore Cotton Transport Act were brought to the notice of the Committee at its meeting in July 1931.

The railway stations within the Protected Area are given below :—

Rajputana-Malwa Railway.

Sanawad, Burwaha, Mukhatyara, Choral, Kalakund, Patal Pani, Mhow, Rao, Indore, Palia, Ajnod, Fatihabad, Chambal, Tharod, Piplia.

Godhra, Rutlam, Ujjain, Nagda Railway.

Bamnia, Garoth, Shamgarh.

Indian Midland Railway.

Tarana Road.

The Indore Durbar has been requested to address the Government of India to issue the necessary notification under the Indian Cotton Transport Act authorising railway authorities in British India to refuse to book, except under license, cotton from stations outside the protected area to stations within it.

APPENDIX V.

SUBJECT 7.—*Cotton Policy in Gujerat.*

Secretary's Note.

At the last meeting the Committee had a very full debate on the policy which the Agricultural Department should follow in Gujerat and the discussion was crystallised in the following resolution which was passed unanimously :—

RESOLUTION.—"I. That the case be sent back to the Director of Agriculture, Bombay, with the request that he will lay down comparative experimental plots of 1027 A. L. F. and 1A cottons on :—

(*a*) experimental farms,

(*b*) the lands of representative holdings of ordinary cultivators scattered throughout the area under consideration,

(*c*) that notes of purity of the type, size and shape of the plots, repetitions and other data which will help new interpretations of the results be noted,

(*d*) this experiment to be carried out for two years and reported on to this Committee along with the spinning tests of fibre from the experimental plots and with the results of past tests.

II. That he will collect information to show whether in the region in question there are—

(*a*) differences in quality of soil,

(*b*) differences in methods of cultivation, or

(*c*) other factors which are sufficient to cause difference in price of the fibre such as those shown in columns 2 and 4 of Statement III.

III. That the Ahmedabad and Bombay Millowners be requested to submit their views on this subject to the Indian Central Cotton Committee.

The Director of Agriculture has now forwarded the following extract from a letter received from the Deputy Director of Agriculture, Gujerat, in which the latter asks for the Committee's approval to the details of the arrangements to implement the above resolution so that there may not be experienced the same difficulty in accepting the results as was the case at the last meeting.

Extract from letter No. C-8 of 4th November 1931 from the Deputy Director of Agriculture, Gujerat, Surat, to the Director of Agriculture, B. P., Poona.

With reference to the resolution No. 20 of the Indian Central Cotton Committee, Bombay, of 14th July 1931, I have the honour to state that the wishes of the Sub-Committee of the Indian Central Cotton Committee, Bombay, expressed in No. 1867 of 11th December 1930 of the Secretary, Indian Central Cotton Committee, Bombay, addressed to you, were fully carried out by forming a Committee of the representatives of the Agricultural Department, the growers, the trade and the Mills and by drawing the samples by the small Sub-Comittee appointed by the above Committee and testing the same by the mills and the Matunga Laboratory but doubts were raised about the samples being really representative.

In view of this it is essential that details of the plan to carry out the Resolution No. 20 mentioned above should be approved by the Indian Central Cotton Committee, Bombay, so that there may be no difficulty in accepting the results.

The resolution requires that the comparative experimental plots of 1027 A.L.F. and 1-A cottons should be laid down on :—

(*a*) Experimental Farms.

(*b*) The lands of representative holdings of ordinary cultivators scattered throughout the area under consideration.

(*c*) That notes of purity of the type, size and shape of the plots, repetitions and other data which will help new interpretations of the results be noted.

(*d*) This experiment to be carried out for two years and reported on to the Indian Central Cotton Committee along with the spinning tests of fibre from the experimental plots and with the results of past tests.

As regards (*a*) I may mention that we have laid down random replication test comparing 1A and 1027 A.L.F. on ten plots on the Surat Farm, this being the third year of such trial.

Besides we have grown both these varieties on 10 gunthas plots in four replications which will give a large sample for mill test.

As regards (*b*) I may state that we have already laid down comparative tests on scattered holdings on farmers' land in five centres, viz., Bardoli, Chorashi, Olpad, Jalalpore and Ankleshwar Talukas with the sizes and replications as under:—

	Number of trials.	No. of replications in each trial.	Remarks.
Jalalpore	3	2	Area under each replication is about 10 gunthas.
Bardoli	4	2	
Chorashi	4	2	
Olpad	4	2	
Ankleshwar	4	2	

As regards (*c*)—Notes on purity, etc., are being taken.

As regards (*d*)—The spinning tests for the two varieties will be taken separately for each Taluka by mixing up the produce of all the plots in a Taluka and taking necessary samples for the Mill test as well as the Laboratory test.

This experiment will have to be continued for another year and I would propose for the approval of the Indian Central Cotton Committee the detailed scheme for 1932-33 as under:—

(*a*) The comparative tests of 1027 A.L.F. and 1A will be continued on the Surat Farm according to random method with ten replications.

(*b*) There will be five centres in the District as this year. In each centre there will be two trials with two replications, each replication being on half an acre instead of 4 trials with two replications, each replication being ten gunthas at present. This change is necessary to simplify the tests as it is proposed that the tests should be carried out under ordinary cultivators' conditions.

APPENDIX VI.

THE CENTRAL PROVINCES COTTON MARKET BILL, 1931.

A Bill to provide for the establishment and better regulation of cotton markets in the Central Provinces.

Preamble. WHEREAS it is expedient to provide for the establishment and better regulation of the recognised open markets for the purchase and sale of cotton in the Central Provinces;

AND WHEREAS the previous sanction of the Governor-General required by section 80-A of the Government of India Act and the previous sanction of the Governor required by section 80 C of the said Act have been obtained for the passing of this Act;

It is hereby enacted as follows:—

Short title. 1. This Act may be called the Central Provinces Cotton Market Act, 19 .

Extent. 2. This Act shall apply to the whole of the Central Provinces.

Definition. 3. In this Act, unless there is anything repugnant to the subject or context—

"Cotton" (*i*) "Cotton" includes ginned as well as unginned cotton.

"Cotton Market." (*ii*) "Cotton Market" means a market established under section 4 of this Act.

(*iii*) "A grower of cotton" shall not include a dealer or broker in cotton, although such a person may grow cotton. If a question arises whether any person is a grower of cotton or not for the purpose of this Act, the decision of the Deputy Commissioner of the District in which the person permanently resides shall be final.

"Prescribed." (*iv*) "Prescribed" means prescribed by rules or by-laws made under this Act.

Notification of a cotton market. 4. (1) The Local Government may, after consulting the District Council, Local Boards, Municipalities, Sanitation Panchayats, Notified Area Committees and Village Panchayats in the areas affected or upon a representation made by them, by notification in the Central Provinces Gazette, declare that any place is a cotton market established under this Act.

(2) Every such notification shall define the limits of the cotton market so established and may for the purposes of this Act include within such limits such local area as the Local Government may prescribe.

The Market Committee. 5. For every market there shall be a market committee. The Market Committee shall be constituted as prescribed and shall consist of not less than ten and not more than sixteen members. Of these not less than half shall be persons elected by cotton growers of such area as the Local Government may prescribe. One shall be elected by the District Council and the Local Boards of the district in which the market is situated in the manner prescribed, one by the Municipality, Notified Area Committee, Village Sanitation Panchayat or Village Panchayat, whichever may be the local body within whose area of authority the market is situated, and the remainder shall be elected by the traders in the cotton market in such manner as may be prescribed.

6. Rules. (1) The Local Government may, either generally or specifically for any cotton market or group of cotton markets, make rules consistent with this Act for the purpose of the management and regulation of such cotton markets under this Act.

(2) In particular and without prejudice to the generality of the foregoing power such rules may provide for or regulate—

(*i*) the election of members of the Market Committee, the number of members to be elected by each of the bodies or groups of individuals referred to in Section 5, and the manner of election, the preparation and revision of lists of voters from time to time, and the term of office of such members;

(*ii*) the qualifications and disqualifications of voters and the candidates for election;

(*iii*) the powers to be exercised and the duties to be performed by the Market Committee;

(*iv*) the election of the Chairman and Vice-Chairman of such Committee, their powers and term of office;

(*v*) the filling of casual vacancies in the office of members or in the office of Chairman or Vice-Chairman of the Market Committee ;

(*vi*) the management of the cotton market and the prescribing of fees by the Market Committee, and, subject to the provisions of this Act, the collection and disposal of such fees ;

(*vii*) the issue by the Market Committee of licenses to brokers, weighmen, measurers, surveyors and ware-housemen and other persons using the cotton market and fixing the fees leviable by them, the form in which and the condition under which such licenses shall be issued, and the fees to be charged for such licenses ;

(*viii*) the place or places at which cotton shall be weighed or measured, and the kind and the description of the scales, weights and measures to be used at such place or places ;

(*ix*) the periodical inspection, verification, correction, regulation and confiscation of scales, weights and measures in use in the cotton market ;

(*x*) the trade allowances which may be made or received by any person in any transaction in a cotton market ;

(*xi*) the preparation of plans and estimates for works proposed to be constructed partly or wholly at the expense of the Market Committee, and the grant of sanction to such plans and estimates ;

(*xii*) the form in which the accounts of the Market Committee shall be kept, the manner in which they shall be audited, and the time or times at which they shall be published ;

(*xiii*) the preparation of an annual budget and its submission for sanction, and the reports and returns which shall be furnished by the Market Committee ;

(*xiv*) the disposal of any surplus or part of surplus funds of the Market Committee ;

(*xv*) the time, place and manner in which the money is to be paid to the seller ;

(*xvi*) generally, for the guidance of the Market Committee and for carrying out the purposes of the Act.

(*3*) Any such rule may, when necessary, provide that any contravention thereof or of any of the conditions of any license issued thereunder shall be punishable, on conviction by a competent Magistrate, with a fine which may extend to five hundred rupees.

(*4*) All rules made under this section shall be subject to the condition of previous publication. A copy of the draft of the proposed rules shall be laid on the table of the Central Provinces Legislative Council for one month previous to the next session thereof and shall not be finally published in the Gazette until after the termination of such session.

Bye-Laws.

7. (*1*) Subject to the rules made by the Local Government under the last preceding section the Market Committee may, in respect of the cotton market under its management, make by-laws for the regulation of the business and the conditions of the trading in such market and for the delegation of powers, duties and functions to the Sub-Committee, if any appointed under Section 8 and may provide that contravention thereof shall be punishable by a competent Magistrate with a fine which may extend to fifty rupees.

(2) All bye-laws made under sub-section (1) shall be subject to the condition of previous publication and no bye-law shall take effect until it has been confirmed by the Local Government.

Sub-Committees and Joint Committees.

8. The Market Committee may appoint from amongst its members a Sub-Committee or a Joint Committee for the conduct of any work or works or to report on any matter or matters.

9. (*1*) The Market Committee may employ such officers and servants as may be necessary for the management of the cotton market and may pay such officers and servants such salaries as the Committee thinks fit. The Committee may, in the case of any officer or servant of Government or of a local body which it employs, pay such pension contribution, gratuity or leave allowance as may be required by the rules made by Government or the local body as the case may be, in this behalf and for the time being in force.

Appointments and salaries of servants of the Market Committee.

(*2*) The Committee may also, in the case of any of its officers and servants, provide for the payment to them of such leave allowances, pensions or gratuities as it deems proper and may contribute to any provident fund which may be established for the benefit of such officers and servants.

(*3*) The powers conferred by this Section on the Market Committee shall be exercised subject to any rules which may be made in this behalf by the Local Government.

10. (*1*) Every contract entered into by the Market Committee shall be in writing and shall be signed on behalf of the Market Committee by the Chairman and two other members of the Market Committee.

Contract how executed.

(*2*) No contract other than a contract executed as provided in sub-section (*1*) shall be binding on a Market Committee.

11. All moneys received by a Market Committee shall be paid into a fund to be called "The Cotton Market Fund" and all expenditure incurred by the Market Committee under or for the purposes of this Act shall be defrayed out of the said fund ; any surplus remaining after such expenditure has been met shall be expended as may be prescribed in the rules made in this behalf.

The Market Committee fund.

12. Subject to the provision of Section 11 all fees collected by the Market Committee under this Act or the rules made thereunder shall be expended only on—

Purposes for which fees collected by the Market Committee may be expended.

(*1*) the maintenance and improvement of the cotton market ;

(*2*) the construction and repair of buildings which are necessary for the purposes of such market or for the health, convenience and safety of the persons using it ;

(*3*) the planting of trees, rearing them, making arrangements for providing water to the persons and cattle coming to the market, and like purposes ;

(*4*) the meeting of establishment charges, including payments and contributions towards provident fund, pension and gratuities of the officers and servants employed by the Market Committee ;

(*5*) the preparation and revision of voters' lists, and the elections and bye-elections of the cotton Market Committee ;

(*6*) with the previous sanction of the Local Government, any other purpose whereon the expenditure of the cotton market fund is in the public interests ;

(*7*) the expenses incurred in auditing the accounts of the Committee.

13. (*1*) No trade allowance other than an allowance prescribed by rules or bye-laws made under this Act shall be made or received by any person in any transaction in a cotton market established under this Act, and no civil court shall in any suit or proceeding arising out of any transaction in any such cotton market have regard to any trade allowance not so prescribed.

No trade allowance permissible unless recognised by custom or rules.

Explanation—Every deduction other than deductions on account of deviation from sample, when the purchase is made by sample, or of deviation from standard, when the purchase is made by reference to a known standard, or on account of difference between the actual weight of the sacking and the standard weight or on account of the admixture of foreign matter, shall be regarded as a trade allowance for the purposes of this Act.

(2) No purchaser of cotton shall be allowed to make any deductions from the agreed price of the consignment except for damage including excessive moisture. Any purchaser found making "Dharmadaya," "Gorakshan" or similar other deductions or contributions shall be liable on conviction to a fine which may extend to fifty rupees for each offence.

Market Committee to be a body corporate.

13A. Every Market Committee shall be a body corporate and shall have perpetual succession and a common seal and may sue and be sued in its corporation name, and shall be competent to acquire and hold property both movable and immoveable to lease, sell or otherwise transfer any moveable or immoveable property which may have become vested in or been acquired by it, and to contract and to do all other things necessary for the purposes of this Act.

Power to borrow.

14. (1) Every Market Committee may, with the previous sanction of the Local Government, raise the money required for carrying out the purposes of this Act on the security of any property vested in and belonging to the Market Committee, and of any fees leviable by the Market Committee under this Act.

(2) The conditions under which such money shall be raised and time within which the same shall be repayable shall be subject to the previous sanction of the Local Government.

Supersession of Market Committee.

15. (1) If in the opinion of the Local Government a Market Committee is not competent to perform, or persistently makes default in the performance of, the duties imposed on it by or under this Act, or exceeds or abuses its powers, the Local Government may, after giving the Market Committee an opportunity for explanation, by an order published in the Central Provinces Gazette, declare such Market Committee to be incompetent, or in default, or to have exceeded or abused its powers, as the case may be, and may supersede it.

(2) When a Market Committee has been superseded, all members of the Committee shall, as from date of the order, vacate their offices as members.

(3) When a Market Committee has been superseded, all property and rights vested in it shall, subject to all charges and liabilities affecting the same, vest in Government:

Provided that if no new market committee is constituted for the cotton market under section 5, all property that shall remain after the satisfaction of all debts and liabilities of the superseded market committee shall vest in the local authority of the area in which the cotton market is situated for the purpose of any object of public utility in the said area.

No private market to be opened, in or near places declared to be cotton markets.

16. Wherever the Local Government has, by a Notification under Section 4, declared any place to be a cotton market, no person shall, within the area of such cotton market or within a distance thereof to be notified in the Central Provinces Gazette in this behalf in each case by the Local Government, set up, establish or continue or allow to be continued any other market for the purpose of the purchase and sale of cotton.

Explanation—A person shall not be deemed to set up, establish or continue or allow to be continued a place as a market, for the purposes of the purchase and sale of cotton if he sells his own cotton outside the premises set apart by the Market Committee for the purpose of purchase and sale of cotton.

Penalties.

17. Whoever in contravention of this Act sets up, establishes, continues or allows to be continued any market for the purpose of the purchase and sale of cotton shall be punished on a conviction by a competent Magistrate with fine which may extend to five hundred rupees, and, in case of a continuing breach of the provision of section 16, with fine which may extend to one hundred rupees for each day after the first during which the breach continues.

Offences to be triable only by a first class Magistrate.

18. No offence uunder this Act or under any rule or bye-law made under this Act shall be triable by a Magistrate other than a Magistrate of the first class.

All fines and damages recovered from an offender shall be paid to the Market Committee. Prosecutions under this Act may be instituted by any person duly authorized in writing by the Market Committee in this behalf.

STATEMENT OF OBJECTS AND REASONS.

This Bill is based on the recommendations of the Indian Cotton Committee of 1917-18 and on the Berar Cotton and Grain Markets Law of 1897 and also on the Bill introduced and passed in the Bombay Legislative Council. At present there are cotton markets in the Central Provinces but they are constituted under the Municipal Act of 1922 and hence they are solely under the control of the municipalities. In the municipal towns generally the traders and merchants are the influential persons and it is easy for them to get into the municipality by election and thus to capture that body ; as a result of this the cotton markets which are under the municipal control are under the control of the traders and merchants in the town who try to protect their own interest at the costs of the agriculturists who are the sellers of cotton in the market. The large bulk of sellers or agriculturists who have to deal with cotton have really no voice whatsoever in the management and framing of rules, regulations of the market. At present as there is no representation of the agriculturist sellers on the cotton market, they do not get proper price for their cotton ; deductions and contributions like "Dharmadaya" and "Gorakshana" which are quite illegal are made from the price of the cotton at the time of payment by the purchasers ; not only this but at times the carts of cotton which are unloaded in the ginning factories after the prices are fixed are rejected by the purchaser on some pretext or other and then it goes very difficult for the poor agriculturist seller to manage the things. He has either to give the cotton at the low rate or take it back and wait for the next day in the market. The *Adatyas* in several markets themselves get the *kapas Patti* and thereon payments for the *kapas* sold directly from the purchaser and the seller has no means to make out what the real weight and the price of his cotton is and has to remain satisfied with whatever the *Adatya* gives him in his hands. There are several other malpractices at present going on in several markets in this province. The poor and dumb agriculturists are crying for this and the Government has not yet done anything to put a stop to this. Government also has recognised in Council and out of Council that these malpractices are going on. Now in order to put a stop to this and to regulate the whole thing this Bill has been framed.

This Bill gives power to the Local Government to establish market by notification in the local Gazette after consulting the local authorities. On the establishment of a cotton market a Market Committee is to be constituted of the cotton growers, cotton traders and the representatives of local bodies.

Power for making rules for the composition of the Market Committee, the management of the market and the conduct of the affairs of the Cotton Market Committee is given to the Local Government who have to publish those rules in the Central Provinces Gazette, and also to put them before the Central Provinces Legislative Council before they are brought into force.

Under clause 16, no private market can be opened by private individuals in or near the market for the purchase and sale of cotton, in order to frustrate the object of this Bill.

Provision has also been made for the long felt want of the agriculturists to declare "dharmadaya" and other deductions illegal and any recovery of them is punishable with fine. Provision has also been made with disallowing trade allowances other than those prescribed and for penalties for violation of the substantive provisions of the Act and the rules, subject to the rules made by the Local Government the clause 9 allows market committees to employ servants for the management of the market. In markets, a market Superintendent will probably be needed and in some markets it may be desirable for weighmen to be servants of the Market Committee and not, as at present, the employees of individual buyers. The provision of an unbiased weighman is an important matter.

APPENDIX VII.

SUBJECT 9.—*Madras Cotton Control Bill.*

Secretary's Note.

At the 59th meeting of the Local Sub-Committee held in September 1930, the following resolution was passed and forwarded to the Madras Government:—

"The Central Cotton Committee recommends the Madras Government to introduce suitable legislation to stamp out 'Pulichai' from the Karunganni area and invites attention to similar legislation in force in California and the Sudan."

The Director of Agriculture, Madras, was asked by his Government to prepare a draft bill to this end and this was received from the Madras Government and placed before the Local Sub-Committee at its 68th meeting held on the 28th September 1931 when the following resolution was passed:—

"That this Sub-Committee considers clause 5 (1) (*ii*) rather drastic and the penalties contemplated in clauses 4 and 6 (2) very severe, considering the fact that the Bill is the first of its kind in India and recommends to the Madras Government that the Bill might be passed with necessary modifications to make it less severe. Drastic legislation could be introduced later on, if necessary."

A copy of the draft bill is attached. The action of the Local Sub-Committee requires the endorsement of the Central Cotton Committee.

A Bill to provide for the prohibition of the cultivation and possession of certain kinds of cotton, the mixing of such cotton with other cotton, the trade in such cotton and the restriction of the use of such cotton.

WHEREAS it is expedient in the best interests of the growers of cotton in certain areas in the Presidency of Madras, the cotton trade and the economic prosperity of the said Presidency, to maintain the quality and reputation of the cotton grown in those areas and for that purpose to prohibit therein, the cultivation and possession of certain kinds of cotton, the mixing of such kinds of cotton with other cotton and the trade in such kinds of cotton and to restrict the use thereof;

AND WHEREAS the previous sanction of the Governor-General has been obtained to the passing of this Act:—

It is hereby enacted as follows:—

Short title and extent.

1. (*1*) This Act may be called the Madras Cotton Control Act, 193 .

(*2*) It extends to the whole of the Presidency of Madras.

Definitions.

2. In this Act, unless there is anything repugnant in the subject or context—

(*a*) "cotton" means cotton plant, ginned and unginned cotton, cotton waste and cotton seed;

(*b*) "notified area" means an area in which any kind of cotton is proscribed by a notification under section 3; and

(*c*) "proscribed cotton" means cotton proscribed by a notification under Section 3.

Power of Local Government to issue notification proscribing specified cotton and prohibiting its cultivation, etc.

3. (*1*) If the Local Government are of opinion that the mixing of any kind of cotton with other cotton will be detrimental to the best interests of the growers of cotton, the cotton trade or the economic prosperity of the Presidency of Madras, they may by notification in the Fort St. George Gazette—

(*i*) declare such kind of cotton to be proscribed, and

(*ii*) prohibit—

(*a*) the cultivation of such proscribed cotton, or

(*b*) the mixing of such proscribed cotton with any other kind of cotton, or

(*c*) the possession of such proscribed cotton or of any cotton which is mixed with such proscribed cotton, or

(*d*) the trade in such proscribed cotton, or

(*iii*) restrict the use of such proscribed cotton.

(2) Every notification under sub-section (1) shall define the local area within which and the period during which it shall be in force.

(4) Whoever, in contravention of any notification under section 3 (*a*) cultivates any proscribed cotton, or

Penalties.

(*b*) mixes any proscribed cotton with any other kind of cotton, or

(*c*) possesses any proscribed cotton or any cotton which is mixed with any proscribed cotton, or

(*d*) trades in any proscribed cotton, or

(*e*) uses any proscribed cotton, shall be liable to a fine which may extend to fifty rupees and in default to simple imprisonment which may extend to one month and upon any subsequent conviction to a fine which may extend to five hundred rupees and in default to simple imprisonment which may extend to six months:

Provided that the keeping in a spinning mill of any proscribed cotton in the form of unginned cotton for the purpose of manufacture into yarn in that mill shall not be deemed to be an offence under this Act.

5. (*1*) Any officer authorised in this behalf by the Local Government may—

Power of entry and seizure.

(*i*) between the hours of 6 a.m. and 6 p.m.

(*a*) enter upon any land in a notified area in which he knows or suspects that any proscribed cotton is being cultivated in contravention of a notification under section 3 and may uproot or cause to be uprooted any such cotton, and

(*b*) enter upon or into any land, building, vessel or place in a notified area in which he knows or suspects that any proscribed cotton or any cotton which is mixed with any proscribed cotton is kept in contravention of a notification under Section 3;

(*ii*) in case of resistance to entry under clause (*i*), break open any door and remove any other obstacle to such entry; and

(*iii*) seize such uprooted cotton, proscribed cotton or cotton which is mixed with any proscribed cotton, as the case may be.

(2) Every officer seizing any cotton under this section shall forthwith—

(*a*) make a report of such seizure, to the Magistrate having jurisdiction to try the offences committed in respect of such cotton, together with a list of such cotton and furnish a copy of such list to the occupier of the land, building, vessel or place on or in which such seizure was made, and

(*b*) subject to such rules as the Local Government may prescribe, forward such cotton to the nearest officer authorised by the Local Government to receive it, for examination and report to the Director of Agriculture, Madras.

(3) The opinion of the authorised officer referred to in clause (*b*) of sub-section (2) contained in any document signed by such officer regarding the cotton sent to him for examination under that clause, may be used as evidence as to the nature of such cotton, in any inquiry, trial or proceeding under this Act.

6. (*1*) (Every owner or occupier of any land, building, vessel or place shall give all reasonable facilities to any officer authorised under sub-section (1) of section 5 to inspect such land, building, vessel or place.

Duty of owner and occupier to give facilities for inspection by authorised officer.

(*2*) Whoever commits a breach of the provisions of sub-section (1) shall be punishable with fine which may extend to rupees fifty.

7. No prosecution for an offence made punishable by this Act shall be instituted:—

Previous sanction and limitation for prosecution.

(*i*) without the previous sanction of the Director of Agriculture, Madras, or

(*ii*) after six months from the date of the commission of the offence.

8. No offence made punishable by this Act shall be inquired into or tried by a Court inferior to that of a Presidency Magistrate or a Magistrate of the second class.

Trial of offences.

9. No suit, prosecution or other legal proceeding whatsoever shall be entertained in any court against any person for anything in good faith done or intended to be done in pursuance or execution of this Act.

Indemnity.

10. (*1*) The Local Government may, by notification in the Fort St. George Gazette, make rules consistent with this Act to carry into effect the purpose thereof.

Power of Local Government to make rules.

(*2*) In making any rule, the Local Government may provide that a breach thereof shall be punishable with fine which may extend to fifty rupees.

APPENDIX VIII.

SUBJECT 10.—*Cotton Ginning and Pressing Factories Act—Progress made in Indian States.*

Secretary's Note.

Since the last meeting of the Committee the following further information has been received regarding the progress made in Indian States in the introduction of legislation on the lines of the Indian Cotton Ginning and Pressing Factories Act.

Narsingarh State.—The Darbar has framed a set of Cotton Ginning and Pressing Factories Rules which have been in force from 31st December 1930.

Kotah State.—There is only one cotton pressing factory in the State. The Kotah Cotton Ginning and Pressing Factories Rules of Samvat 1988 came into force from the 1st October 1931. The press mark is KT.

Bikaner State.—It is understood that a Cotton Ginning and Pressing Factories Bill will be placed before the forthcoming session of the Bikaner State Legislative Assembly.

Bundi State.—The State has agreed to furnish weekly cotton press returns during the current cotton season.

Gwalior State.—The Gwalior Cotton Ginning and Pressing Factories Act together with the rules have been approved by the Special Committee of the Council and referred to the Council for approval and necessary action.

Mysore State.—The Mysore Cotton Ginning and Pressing Factories Rules have been published and cotton press returns are now being supplied. There are six pressing factories in the State.

Maler Kotla State.—The British India Cotton Ginning and Pressing Factories Act (Act XII of 1925) has been adopted by the State.

Jasdan State.—There is only one cotton pressing factory in the State and its manager has been instructed to mark bales and submit press returns.

Dewas, Junior Branch.—The introduction of legislation on the lines of the British India Cotton Ginning and Pressing Factories Act is engaging the attention of the Darbar, and a resolution is being framed.

Lakhtar State.—In 1928, the Darbar issued instructions to the Manager of the only cotton pressing factory in the State to mark bales and maintain press registers according to the practice in British India. The Darbar has now introduced weekly cotton press returns.

The present position is that 59 States have now enacted legislation on the lines of the British India Act and 55 States supply weekly cotton press returns.

APPENDIX IX.

SUBJECT 11.—*Cotton Ginning & Pressing Factories Pools—Report of the Local Sub-Committee on the Reports of investigations carried out in the Central Provinces, Ajmer-Merwara and Bombay Presidency.*

At the monsoon meeting last year, the Committee sanctioned funds for carrying out an investigation into the effect of 'pools' of cotton ginning and pressing factories on the price paid to the grower for his cotton. It was decided that the investigations should be carried out in localized areas in Surat and Khandesh, in the Central Provinces and Berar and in Ajmer-Merwara and the Local Governments were asked to carry out the enquiries. Reports have now been received from all Local Governments and are attached* for the information of members.

The reports of the Ajmer-Merwara and the Central Provinces investigations were circulated to members of the Local Sub-Committee before the meeting of the Sub-Committee held on the 7th December and though the Bombay report was not received in time for circulation to members, it also received consideration.

It will be recalled that the reason for sanctioning these investigations was because some members doubted whether these 'pools' had any deleterious effect on prices. The information supplied answers that question and there can be no doubt that the price paid for the ginning and pressing of cotton under conditions of a 'pool' is distinctly higher than under 'non-pool' conditions.

The causes of the formation of pools and the suggested remedies are given in Paragraph 231 of the Report of the MacKenna Committee which is reproduced below :—

"231. In most of the cotton centres the ginning and pressing factories have combined to form pools, a system which is in many ways objectionable and prejudicial to the interests of the cultivator. Under this system, the procedure is, as a rule, for the same charge for ginning and pressing to be levied by all the factories participating in the pool. A certain proportion of this charge, considered sufficient to cover the actual cost of ginning and pressing, is retained by each factory and the remainder is paid into the pool and is divided at the end of the season *pro rata* to the number of gins or presses owned by the various members. In some cases, pools have resulted from changes in economic conditions. The opening of new railways or roads and consequent improvements in communication have left ginning and pressing centres high and dry, with an inadequate supply of cotton to keep the gins and presses fully employed. The factories in order to protect themselves against cut-throat competition and to secure a reasonable return on the capital invested in them, therefore, formed themselves into a pool. But both in these cases and in others, in which pools were formed without such good reasons the result has frequently been that new ginning and pressing factories which have never worked and which were never intended to work have been erected in places already over-supplied. The only object with which they were erected was to share in the profits of the pool and the mere threat to start working has been sufficient to secure

Ginning and pressing pools.

* Not printed.

the entry of their owners into the pool. In consequence, rates have been forced up to a level which can only be regarded as excessive, to the detriment of the cultivator who is unable to stand out against a monopoly. Whilst, in most districts, the ginning and pressing charges, including the contribution to the pool, average about Rs. 5 to Rs. 6 for ginning and the same amount for pressing a bale of 400 pounds of lint, in some cases we found rates as high as Rs. 11 or Rs. 12 for each process.

It is difficult to suggest any suitable remedy for the evils resulting from pools. We cannot, on principle, recommend an obvious solution which would be the fixing of rates by Government. We look forward to a great increase in the number of ginneries run by Co-operative Societies but this will be a very slow process. In the meantime, the proposal we have put forward above that no license should be granted to a ginning or pressing factory, which does not undertake to work for at least eight weeks in the year, unless prevented by causes beyond the control of its owner, should have a beneficial effect in preventing the creation of gins or presses merely for the purpose of sharing in the profits of a pool. We would further suggest that, in districts where there are more ginning or pressing factories than are necessary for dealing with a bumper crop, the local authorities might induce the owners of some of the factories to move them to localities, where they would be of real use, by the offer of Government land on easy terms. We consider that, where members of a pool in any district keep one or more factories closed, without adequate justification, no night shift working should be allowed in any circumstances. Night shifts are allowed under the Factory Act with the permission of the Factory Inspector. In the cases specified, such permission should invariably be refused. We do not see why labour should be asked to work at night when there are factories existing which, if worked during the day-time, can deal with the crop of the season, without resorting to a night-shift."

In view of the fact that the licensing of gins and presses was not made compulsory under the Cotton Ginning and Pressing Factories Act the action proposed above cannot be applied to factories in British India though certain Indian States are further advanced in this respect.

The Local Sub-Committee is of opinion that under present conditions nothing can be done by this Committee beyond drawing the attention of the Local Governments concerned to the reports carried out by their own officers and requesting them to take what action they consider necessary to see that the grower is not penalised by a combine of factory owners. An investigation carried out by the Punjab Government also showed that the price charged for ginning and pressing was higher in a place where a pool existed. The evil appears to be general in India and the Local Sub-Committee is of opinion that copies of the reports should be sent to all Local Governments and their attention drawn to the action suggested for the Provinces where enquiry has shown that the existence of 'pools' increases the cost to the grower of ginning and pressing.

APPENDIX X.

SUBJECT 12.—*Establishment of markets under the Hyderabad Agricultural Markets Act.*
Secretary's Note.

Information has been received from the Director-General and Secretary to Government, Department of Commerce and Industry, H. E. H. the Nizam's Government, that the Hyderabad Agricultural Markets Act has been applied to the following towns in the State in addition to the existing market at Nanded :—

Jalna	..	In Aurangabad District—for cotton and other agricultural produce.
Umri	..	Nanded District—for cotton.
Latur	..	Osmanabad District—for cotton.
Sailu—	..	Parbhani District—both for agicultural produce and cotton.

APPENDIX XI.

SUBJECT 14.—*Summary of Proceedings of the Local Sub-Committee.*

Secretary's Note.

Since the last meeting of the Committee in July, four meetings of the Local Sub-Committee have been held. Mr. W. Ellis Jones resigned membership of the Committee and his place on the Sub-Committee was filled by Sir Purshotamdas Thakurdas.

2. The Sub-Committee addressed the B. B. & C. I. Railway protesting against the proposed increase in the terminal charge on cotton from local stations to Bombay. The increase has not been made.

3. The Sub-Committee also sent a strong representation to the Bombay Government protesting against the proposal of the Bombay Municipal Corporation to levy an export duty on raw cotton.

4. The Sub-Committee dealt at three of its meetings with correspondence in connection with a protest against the increase in license fees for *adhatyas* under the Revised Berar Market Rules. The Sub-Committee considered that the new Rules should first be tried out before amendments were suggested and no further action was taken.

5. The Sub-Committee went very carefully into a draft Bill—the Madras Cotton Control Bill—sent for opinion by the Madras Government, but considering the penalties too severe the following resolution was passed requesting the Government of Madras to modify some of the clauses:—

"That this Sub-Committee considers clause 5(*1*) (*ii*) rather drastic and the penalties contemplated in clauses 4 and 6(*2*) very severe, considering the fact that the Bill is the first of its kind in India and recommends to the Madras Government that the Bill might be passed with necessary modifications to make it less severe. Drastic legislation could be introduced later on, if necessary."

6. The Karachi Joint Cotton Committee consulted the Committee on the desirability or otherwise of fixing the staple of the Punjab-American contract at $\frac{3}{4}$" *average* instead of $\frac{3}{4}$" *minimum*. In view of the encouragement that a lowering of the standard would give to mixing, the Sub-Committee decided to recommend to the Karachi Joint Cotton Committee that the standard should be kept at $\frac{3}{4}$" minimum.

7. The Sub-Committee approved of the revised draft rules under the Hyderabad Agricultural Markets Act.

8. The Sub-Committee was consulted by the Central Provinces Agricultural Department regarding the marketing of *Verum* cotton and it was decided to refer the Marketing Officer to the East India Cotton Association with whom a satisfactory arrangement has been worked out.

9. The Sub-Committee went very carefully into the Reports submitted by the Local Governments of Bombay, the Central Provinces and Berar and Ajmer-Merwara into the effect of 'pools' of cotton ginning and pressing factories on the price paid to the grower for his cotton. This is dealt with separately in the form of a Report from the Sub-Committee to the Central Cotton Committee.

10. The Sub-Committee also considered the suggestions submitted by Directors of Agriculture on the question of publicity and propaganda in the Provinces in connection with the Committee's work. The Sub-Committee's views on this subject are given in the from of a report which will be found separately on the Agenda.

APPENDIX XII.

SUBJECT 15.—*Publicity and Propaganda work by the Committee—Report of the Local Sub-Committee on replies received from Provincial Directors of Agriculture.*

One of the recommendations of the Local Sub-Committee on Publicity and Propaganda accepted by the Central Cotton Committee at its July meeting was as follows:—

"We consider that much more direct publicity could be given to the Committee and its work by the Provincial Agricultural Departments and by the Provincial representatives on the Committee than has been done in the past. The Committee should request the Head of the Agricultural Department in each Province to submit proposals for the extension of publicity and propaganda with regard to the Committee's work in the Province and to indicate in what manner and to what extent the assistance of the Committee could be most profitably utilised in such work."

Directors of Agriculture were accordingly addressed and asked to submit proposals. Their replies have been received and are attached.*

These proposals were considered at the meeting of the Local Sub-Committee held on the 7th December, and the Sub-Committee desires to make the following recommendation:—

The replies received to the Committee's pamphlet on Cotton Improvement in India, which contained in addition suggestions for future work, show that the Committee's work is neither known nor appreciated and the Local Sub-Committee is of opinion that this is due entirely to the fact that no systematic publicity has been carried out. The Local Sub-Committee is strongly of opinion that much more attention should be paid to this branch of the Committee's activities, and recommends that the Committee should employ a professional journalist or publicity agent, on the lines of the suggestion contained in Mr. Main's letter, to write up for the press the work the Committee has done and is doing; to devise the best means of bringing the Committee's work to the notice of the trade, the grower and the general public; to consider, in consultation with local authorities, the suggestions already received as to methods of propaganda and publicity and to decide how far they are applicable to other areas.

The Sub-Committee feels that the adverse criticisms which has been levelled against the Committee and its work would have been of the reverse order if the public had been kept informed of our activities and it therefore strongly recommends that scientific propaganda should be taken in hand at once and this can only be done by one trained in this form of work.

APPENDIX XIII.

SUBJECT 17.—*Technological Research—Progress Report of the Director, Technological Laboratory, Matunga.*

Summary of Progress Report (No. 17) of the Director, Technological Laboratory, Matunga.

INTRODUCTION.—The present report gives a review of the work done at the Technological Laboratory from 1st June 1931 to 31st October 1931. As will be shown in the body of the report the progress of the work, described in my last Progress Report No. 16, has been well maintained in all directions, viz., testing of agricultural and trade samples, technological work, research work on properties of cotton fibre, etc., etc. The Moisture Testing Section to which a brief reference was made in the previous report has been working in full swing during the period under review. One series of tests on specially pressed bales of cotton has already been completed and another series of tests on ordinary bales is under contemplation. The work done during the period under review will be described under the following heads:—

I. Spinning Laboratory.
II. Research Laboratory.
III. Moisture Testing Section.
IV. Publications.
V. General.

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* Not printed.

I. *SPINNING LABORATORY.*

The following table gives the distribution of the samples received for tests up to 31st October 1931 together with the figures for the corresponding period of the previous year :—

	1-6-31 to 31-10-31.	1-6-30 to 31-10-30.
Agricultural Departments	42	50
Trade Samples	19	27
Fibre Test samples	66	3
Special test samples	4	..
	131	80

It will be seen that as compared with the corresponding period of 1930 there is a small decrease in the number of cottons received for spinning tests but a very considerable increase in the number of samples received for fibre tests. The total number of samples received for tests shows an increase of as much as 64 per cent. over last year's figure.

The number and distribution of samples, lots and counts actually spun together with the corresponding figures for 1930 are given in the following table :—

Province.	Samples.		Lots.		Counts.	
	1-6-31 to 31-10-31	1-6-30 to 31-10-30	1-6-31 to 31-10-31	1-6-30 to 31-10-30	1-6-31 to 31-10-31	1-6-30 to 31-10-30
Bombay	21	36	21	44	67	133
Punjab	27	25	27	25	78	62
United Provinces	..	4	..	4	..	8
Madras	35	50	35	50	108	148
Central Provinces	..	..	..	..	..	..
Miscellaneous	24	14	24	14	72	42
Total ..	107	129	107	137	325	393
Standard	..	1	..	1	..	9
Trade Tests	23	27	47	27	109	63
Special Tests	12	..	16	..	48	..
Grand Total ..	142	157	170	165	482	465

It will be seen that as compared with 1930 there is a small decrease in the number of samples spun but the numbers of lots and counts into which these samples were spun show a small increase.

The following table shows the distribution of spinning test and fibre test reports issued during the period under review together with figures for the corresponding five months of 1930 :—

Reports.	1-6-31 to 31-10-31	1-6-30 to 31-10-30.
Spinning Test Reports	39	41
Fibre Test Reports	10	..
Total	49	41

It will be seen that whereas the number of spinning test reports issued is very nearly the same the number of fibre test reports issued in 1931 is 10 as compared with nil in 1930. The total number of reports issued shows an increase of 22 per cent.

Agricultural Samples.—From amongst the tests on agricultural samples the following may be mentioned as being of particular interest.

1. Tests on samples of Karunganni cotton known to be adulterated with the inferior Pulichai cotton. The Karunganni cotton has, on the average of 7 seasons, been found suitable for 24's standard warp counts whereas the best sample among the adulterated mixtures could only spin up to 16's counts. This shows clearly the great harm done by adulterating Karunganni with Pulichai cotton.

2. Tests on mixtures of Punjab-American 289F and 4F. Hitherto similar tests have been made on known mixtures of 4F and *desi* cotton but with the extension of the area under cultivation of Punjab-American 289F in the Punjab it is highly probable that the practice of mixing may spread to 289F and 4F. It was, therefore, thought desirable to forestall such a possibility by undertaking tests on mixtures containing known quantities of P. A. 4F. The mixtures selected for this purpose contained 10, 20, 30, etc., per cent. of 4F and the spinning tests yielded the significant result that, on the average, an increase of 10 per cent. in the proportion of 4F reduced the spinning value of the mixture by 3 standard warp counts.

Trade Tests.—According to the agreement between the East India Cotton Association and the Indian Central Cotton Committee, the Association continued to supply samples of cotton representing fair average quality of the commercial crop. Altogether 15 such samples were received and tested during the period under review. Another 6 samples were received and tested by virtue of a similar arrangement between the Millowners' Associations of Bombay and Ahmedabad and the Committee. The trade descriptions of these cottons are given in the list of Technological Circulars in the 'Publication' section of this report.

An interesting series of tests were undertaken on behalf of the East India Cotton Association on samples of African cottons. Owing to the increasing consumption of these growths in India the East India Cotton Association has appointed a Special Sub-Committee on African cottons for the purpose of fixing suitable standards for these growths. The Association asked the Technological Laboratory to help them in the matter of standards for staple length of these cottons. During the last 3 months nine samples of African cottons have been received and reported upon.

High Draft Spinning.—The results of high draft spinning employing three different systems of high drafts with mixtures of two Indian cottons, viz., Cambodia Co. 1 and C. P. (Wun) are now ready in the form of a Bulletin which will be published soon. Since the completion of these tests the equipment of the Spinning Laboratory has been strengthened by the addition of another ring frame kindly presented to the Laboratory by Messrs. Platt Bros., Oldham, through the courtesy of Messrs. Nowrosjee Wadia & Sons.

This ring frame has now been erected, the drive being provided by a one H. P. variable speed motor supplied by Messrs. Asea Electric Ltd. As soon as opportunity permits, it is proposed to continue further tests on high draft spinning employing the new ring frame in addition to the three old frames.

Combing of good quality Indian cottons.—In accordance with the programme of future work approved by the Committee at its last meeting the work of spinning combed good quality Indian cottons into finer counts has been taken in hand. The first cotton to be investigated was Punjab-American 289 F, which had shown a distinct improvement in the 1930-31 season. The tests are as yet in the preliminary stage but they have already shown that cottons possessing the fibre properties of P. A. 289F, 1930-31 season, can be spun without much difficulty into 60's counts when combed to the extent of 20 per cent. and into still finer counts when the proportion of comparatively shorter fibres removed by the combing machine is raised to the extent of 30 per cent. The comber waste was mixed with P. A. 4F in the proportion of 1 to 3 and spun into 16's and 20's yarns. The 20's yarns were somewhat below the necessary strength but with a suitable twist the 16's yarns would come up to the requisite strength. This work is now being extended to Cambodia 295, Surat 1027 A. L. F. and Nandyal 14.

Effect of Crighton speed on the blow-room loss and the quality of the yarn spun from a cotton.—These tests were made on particularly dirty samples of Mattia and Kalagin cottons, containing some 20 per cent. to 25 per cent. of foreign matter. The beater speeds ranged from 50 r. p. m. to 1,000 r. p. m. These tests have shown that as the beater speed is increased there is a small but progressive increase in the Crighton loss. The cleaning power obtained by the lowest speed, viz., 550 r. p. m. is unexpectedly high. It was felt that this was due to the relatively longer time for which the cotton remained under treatment in the Crighton Opener. This view has been corroborated by experiments in which two different fan speeds were used for the same beater speed of 950 r. p. m. The sample with the lower fan speed gave a higher crighton loss. The tests are being continued.

Card settings.—The importance of correct card settings in determining the characteristics of the yarn spun from the cotton is well known. It is, however, reasonable to suppose that settings which may be suitable for a long and fine cotton may prove quite unfit for a short and coarse one. As the quality of the yarn depends, to an appreciable extent, upon the correctness of these settings with reference to the fibre properties of cotton, it was regarded highly desirable that a systematic work on the carding problems should be undertaken at the Technological Laboratory. The programme for this work was approved by the Committee and the work has since been started. In order to cover as wide a range as possible of the types of cotton which are used in Indian Mills the following three cottons have been selected for these experiments: Berars representing short staple, Dharwar-American representing medium stable, and A. R. Kampala representing long staple. The work is in progress.

II. *RESEARCH LABORATORY.*

Fibre Testing Section.—This section has been kept fully occupied with the determination of the fibre properties of the routine samples received for spinning tests, and with the tests on the large number of samples received specifically for fibre tests which are mentioned below. A number of additional tests on some of the cottons which gave anomalous results during the year are also being made with a view to find out if these anomalies can be explained in terms of properties other than those which are ordinarily determined. These tests are still in progress.

Special fibre tests.—Usually a small number of samples are received specially for fibre tests but during the 5 months under review there has been very considerable increase in the number of such samples. This increase is mainly due to the vigorous selection work going on at Parbhani, Hyderabad-Deccan, which contributed no less than 52 samples, each representing a distinct strain. Owing to the pressure of work it was found possible to test only 19 of these samples.

Mr. Hari Rao in addition to supervising the routine work of the Section has continued his experiments on the study of the effect of torsion on the length and strength of a cotton fibre.

Physics Section.

Mr. Kapadia in conjunction with Mr. R. P. Richardson, Spinning Master, is now engaged on the study of the effect of different card settings on the quality of the yarn to which reference has already been made. The work involves the determination of the fibre-properties of the different card wastes, of the regularity of the card sliver and of the properties of the yarn spun for a large number of samples given by the 3 different cottons.

Mr. Koshal is carrying on his investigation on the differences in fibre-length, fibre-weight per inch, and fibre-strength between fibres extracted from the base and the apex of a seed. He has now nearly completed six cottons and his results have shown that in the case of some cottons at least large differences may exist in the properties of fibres removed from the base and those removed from the apex. Apart from its practical bearing the results derived so far are of first class importance from the point of view of the development and structure of the fibre. Mr. Koshal is now undertaking a few more cottons in order to see if these differences have any relationship with the botanical species or seasonal variation of the cottons.

Mr. Srinagabhushana is carrying on his investigation on similar lines on the differences which have been found to exist in rigidity, ribbon-width and number of convolutions of fibres taken from the base and the apex of a seed. This work is supplementary to that of Mr. Koshal and when the two are completed it is hoped that the results will throw a great deal of light on the structure of the cotton fibre and its development with respect to the part of the seed on which it grows.

Chemistry Section.

Mr. Sen has devoted part of his time in completing the work on the moisture content of the bales of cotton pressed under known conditions of humidity and temperature. He has, in addition, determined the ash and wax content of the fibres from the base and apex of the seed for two cottons. His results have shown that whereas the wax-content of the apical fibres is greater than that of the basal fibres, the reverse is the case with the ash-content. This result has thrown open the possibility that this difference in the chemical constitution of the fibres is due to a difference in the constitution of the different parts of the seed. He is accordingly engaged in determining the wax-content and the ash-content of the two halves of the cotton seed.

Mr. Sen has furthermore undertaken an extension of the work on the spontaneous combustion of cotton which was done at the Laboratory some time ago. The plan of the work has been modified with a view to bring it more into line with the conditions as they actually prevail in the Bombay godowns. Small sample bales of cotton, dry, humid and damp, have been specially prepared for this purpose. Some of these bales contain half a per cent. of gunny bag or half a per cent. of unsaturated oils. Half of these bales will be kept in small pigeon holes made of wire-gauze inside a room and the other half out in the open under the direct action of the sun. These two cases represent the conditions prevailing in the godowns and the *jathas*. A continuous record of minimum and maximum temperature in the two places will be maintained.

Mr. C. Nanjundayya is continuing his work on a study of variation in fibre-strength with the length-grade of the cotton fibre. He has now completed 4 cottons and is extending his studies to other cottons. His results have shown that for all cottons as the length of the fibre increases its strength progressively diminishes. Although fibre-strength does not play so important a part in determining the spinning value of a cotton as fibre-length, yet in the selection of similar strains the question may arise as to how far it is justifiable to sacrifice strength for the sake of fibre-length. In furnishing an answer to this question Mr. Nanjundayya's results when completed will be extremely useful. He has further found that in the case of some cottons at least the interesting relationship holds that for a fairly wide range the product of fibre-strength and fibre-length is a constant. This relationship has an important bearing upon the structure of the cotton fibre as it shows that the fibre is much more uniform along its length than is generally supposed. He is pushing his investigation to see whether this relationship is confined to certain botanical species or whether it is valid for all cottons.

Microscopy Section.—

Mr. Gulati has been engaged during the period under review in studying the effect of maturity of cotton fibre on its neppiness. He spent part of the time in improving the technique of the method so that the number of doubtful fibres should become too small to be of any importance. Mr. Gulati is now engaged in re-examining, with the improved method, the two dozen cottons selected for this purpose. It is proposed to supplement this work by making spinning tests on saw-ginned and roller-ginned samples of the same cottons. The gins for this purpose have already been acquired by the Laboratory and the tests will be made when the cottons of the next season are available.

Variation in the weight of a bale.

It was mentioned in my last Progress Report that the observations started last year on the variation in the weight of bales of cotton would be continued until a cycle of 12 months was completed. This was done and at the expiry of this period the bales were opened and the moisture content of each bale was accurately determined according to two methods fully described in my Annual Report. In the meantime the East India Cotton Association had kindly supplied three new bales, one each of Bengals, Berars and Broach, for a continuation of these experiments. This was regarded necessary not only to have repeat observations on a work of such important nature as this, but also to cover the pre-monsoon period during which it was not possible to make observations last year. These three new bales were placed in a room at the Cotton Exchange, Sewri, on 20th April 1931 and have since been weighed once a week on an Avery Platform balance. They were transferred to Godown No. C42 with kind permission of the Proprietors, Messrs. Jamnadas Nursey Ginning & Pressing Factory, Ltd. The continuous record of the humidity and the temperature in the Store-room and the godown has been maintained by means of a Thermo-Hygrograph. The following table shows the variation in weight of these three bales in roughly three equal periods of about 2 months each. The average humidity in the room and the godown is also shown and the percentage increase in the weights of bales reckoned on the basis of the initial weights is given in the underlined figures.

Table.

Initial weight on.	Humidity.	Bengals. lbs. oz.		Berars. lbs. oz.		Broach. lbs. oz.	
20-4-31 ..		410 14		414 12		373 7	
	61%		0.08%		0.72%		0.55%
22-6-31 ..		411 3		417 12		375 8	
	80%		1.87%		2.11%		2.36%
24-8-31 ..		418 9		423 8		382 4	
	75%		2.18%		2.41%		2.63%
19-10-31 ..		419 13		424 12		383 4	

It will be seen that from 20th April to 22nd June 1931 when the humidity was in the neighbourhood of 60% there was practically no change in the weight of the Bengals bale and a small increase in the weights of the Berars and the Broach bales. The monsoon set in soon after 22nd June and all the bales began to pick up weight. In the next two months the Bengals bale had picked up nearly 7½ lbs. of moisture giving an increase of 1.87% over the initial weight, the Berars bale had absorbed 5¾ lbs. resulting in a total increase of 2.11% on its initial weight while the Broach bale had picked up 6¾ lbs. of moisture giving an increase of 2.36% over its initial weight. During these two months the prevailing humidity was generally over 80%. After 24th August 1931 there was a gradual decline in the relative humidity of the atmosphere and the rate at which the bales continued to pick up moisture slackened considerably. In the next two months each bale picked up 1 lb. or a little over of moisture and on 19th October 1931 when the bales weighed heavier than at any time in the season, the maximum increase was 2.18% for the Bengals, 2.41 for Berars and 2.63% for Broach. Since 19th October there has been a sudden decline in the humidity and the bales have now started losing weight steadily. It is noteworthy that this year the monsoon started later than last year and the results of experiments over the two years will accordingly take into consideration the behaviour of the bales in conditions arising from an early as well as a late monsoon.

III. *MOISTURE TESTING SECTION.*

The work done in the Moisture Testing Section of the Laboratory at the Cotton Exchange, Sewri, has been fully dealt with in my Annual Report for 1930-31. It may briefly be mentioned here that the experiments on 40 bales of cotton which included C.P. No. 1, C. P. No. 2, Berar, P. A. 4F, Mollisoni and Broach have been completed. This work involved the determination of moisture content of 220 samples drawn from these bales. The results were submitted in the form of a report to the Technological Research Sub-Committee which decided that, for the present, only the results and the tentative conclusions should be forwarded for information to the East India Cotton Association. As these bales were especially pressed for these experiments and thus may not be strictly

comparable with the ordinary trade bales, it is proposed to extend the work already done by making further tests on samples drawn from bales of different growths which are received in Bombay. In addition to this work, moisture tests on 35 samples of cotton selected by the Appeal Committee of the East India Cotton Association were also made during the period under review.

IV. *PUBLICATIONS.*

The following is a list of the Bulletins and Technological Circulars issued during the period under review :—

Bulletins.

II. Technological Series A, No. 18—"Technological Reports on Standard Indian Cottons, 1931." (Summary given in the Annual Report 1931.)

Technological Circulars : Cotton.	*Technological Circular.*	*Date of issue.*
Karunganni and Kurnool Cambodia cottons ..	52	June 1931.
Nandyal	53	June 1931.
Surat, Navsari and Cambodia	54	June 1931.
Dhollera, Westerns, Farm Westerns and Kumpta ..	55	July 1931.
A. R. Kampala, Busoga and Jinja cottons	56	August 1931.
Kalagin, Bijapore, and Bagalkote	57	August 1931.
Upland, Cambodia and Karunganni	58	August 1931.
Kadi-Viramgam & Tinnevelly	59	August 1931.

V. *GENERAL.*

Staff.—Mr. H. N. Dutt was on study leave from 4th August 1930 to 3rd May 1931. On his return to India he was suspended pending the decision of the Finance Sub-Committee for gross disobedience and failure to submit reports of his work during study leave. The Finance Sub-Committee decided, on 29th August 1931, to terminate his services.

Junior Testers :—Mr. S. Samson was appointed as a Junior Tester as from 25th August 1931 in place of Mr. P. H. Sharma who resigned his post to take up an appointment in Indian Railway Service. Owing to the pressure of work Messrs. K. S. Samant and V. S. Raghavan were appointed temporary Junior Testers for a period of three months from 21st September 1931.

Alignment of machines.—It was stated in the previous Progress Report that advantage was taken of the temporary stoppage of work in the Blow-room, during the erection of variable speed motor to align all the machines in the blow-room. During the period under review the fly frames and the ring frames which had been also affected by the gradual sagging of the floor were properly aligned.

Equipment.—Apparatus.

(1) *Yarn Examination machine* with an automatic spreading motion supplied by Messrs. Henry Baers for the purpose of winding yarns on the black cardboards which are preseved for future reference.

(2) *Amtex Humidifier :* this humidifier has been installed in one of the rooms of the Research Laboratory to meet the difficulty which often arose on account of the changes in humidity which forced the Research Assistants to temporarily suspend their work until suitable humidity was found to prevail again. With the help of this humidifier it will now be possible to maintain the humidity in the room at any desired value. The humidifier has been erected and is working in good order.

Machinery.—Ring frame 48-spindle fitted with the C. S. L. high draft system on one side and ordinary 3-line roller high draft system on the other sides. Reference to it has already been made in the Section dealing with the Spinning Laboratory.

Patent hand power Macarthy type cotton gin 12" wide with moving seed grid and buffalo leather washer roller manufactured by Platt Brothers Ltd.

Hand Saw Gin with 16 saws, 8" diameter with condenser.

These two gins have been purchased in accordance with the decision of the Committee and in connection with the proposed work on neppiness of cotton. These gins have been received and erected.

Acknowledgments.—I wish to place on record my appreciation of the work of my staff who have continued to give me their loyal support and ready co-operation.

(Sd.) NAZIR AHMAD,

Director,

Technological Laboratory.

27th November, 1931.

APPENDIX XIV.

SUBJECT 18.—*Technological Research—Report of the Technological Research Sub-Committee.*

This Sub-Committee met twice during the last six months, one special meeting having been called to discuss the report submitted by the Director, Technological Laboratory, on his tests on the moisture content of cotton. These tests were made on bales pressed n the factories under known conditions of temperature and humidity, but in order to complete them it is necessary to find out the percentage of moisture in trade bales as they arrive in Bombay from different parts of the country. This aspect of the work is now being put in hand. The Sub-Committee decided to send for the information of the East India Cotton Association a statement giving the results obtained, with a caution that no action regarding the normal moisture content of cotton should be arrived at until the tests had been completed. It was further decided that the final results should be printed in the form of a Technological Bulletin for distribution.

2. The Director's Progress Report for the five months ending 31st October was considered at the second meeting of the Sub-Committee and approved. The total number of samples received for test continues to increase, an average of 26 a month having been received compared with 16 in the corresponding period last year. Two series of tests carried out during this period deserve special mention. Samples of *Karunganni* known to be adulterated with *Pulichai* cotton varying in amount from 15 to 21% were tested and the best samples were found to spin upto 16's counts only whereas pure *Karunganni*, on a seven years' average, has been found suitable for 24's standard warp counts. Mixtures of Punjab-American 289F and 4F were also tested and it was found that on the average every increase of 10% 4F reduced the spinning value of the mixture by three standard warp counts. The Sub-Committee is of opinion that if such information were to be generally known, it might be of use in checking mixing, and recommends that short pamphlets giving the above results and also the results previously found regarding known mixtures of 4F and *desi* should be printed and distributed.

Twenty-one samples representing the fair averag equality of the commercial crop of the season, received from the East India Cotton Association and the Millowners' Associations of Ahmedabad and Bombay, were tested and the results published in Technological Circulars.

To help the East India Cotton Association to fix suitable standards for African cottons, the Technological Laboratory has been determining the mean fibre length of average samples of A. R. Kampala, A. R. Busoga and A.R. Jinja which are being sent monthly to the Laboratory. Up-to-date nine such samples have been reported on.

Tests on the combing of last season's Punjab-American 289F cotton have shown that 60's can without difficulty be spun from this cotton when combed to the extent of 20% and into still finer counts when 30% of the shorter fibres are removed. The combings were spun into 16's and 20's yarns when mixed with Punjab-American 4F in the proportion of 1 to 3. Three more of the better types of Indian cottons are being experimented with.

The tests on the natural variation in the weight of a bale were completed during the period under report and it is interesting to find that during the monsoon cotton bales in Bombay absorb roughly 10 lbs. of moisture from the atmosphere.

3. The Sub-Committee considered a letter from an Italian correspondent asking for the names of the High Draft Systems mentioned in the Bulletin on the mixings of Indian and American cottons using Ordinary and High Drafts. The Sub-Committee considered that the Director, Technological Laboratory, in the next bulletin which is under preparation, should, in consultation with the Vice-President and the Secretary, give a short description of each system without divulging the name of the makers.

4. The Sub-Committee also considered a request from a Karachi member for an investigation into the deterioration of cotton stored for long periods in Karachi. It was decided that the Director should look up the existing literature and put up a note for discussion at the next meeting of the Technological Research Sub-Committee.

5. The Sub-Committee accepts the Director's suggestion and recommends that Mr. Nanjundayya, Temporary Assistant at the Technological Laboratory, should be appointed as from the 1st August 1932 to the post of Junior Research Assistant which has fallen vacant owing to the dismissal of Mr. H. N. Dutt.

6. The Revised Budget Estimates of the Laboratory for 1931-32 and the Budget for 1932-33 were approved and are recommended to the Committee for acceptance.

TECHNOLOGICAL LABORATORY.

Budget for 1932-33.

	Sanctioned Budget 1931-32.	Revised Estimates 1931-32.	Budget 1932-33.
I. SUPERINTENDENCE.			
1. Director (1,500-100 1,700)			
Salary	35,500	22,000	19,100
Provident Fund..	2,958	1,833	1,591
2. Assistant Director (1,000-50-1,200)			
Salary	12,574	1,024	
Provident Fund..	1,048	85	..
House Rent Allowance..	3,000	250	..
3. Office Clerks:			
(*i*) Salary (150-10-200)	2,150	2,150	2,270
Provident Fund	179	179	189
(*ii*) Salary (120-5-150)	1,725	1,725	1,785
Provident Fund	144	144	149
(*iii*) Salary (120-5-150)	1,450	1,450	1,510
Provident Fund	121	121	126
4. Contingencies:			
(*a*) Pay of menials	350	350	350
(*b*) Other contingencies	2,500	2,500	2,500
5. Temporary Establishment	500	..	500
6. Travelling Allowance	2,000	700	1,500
7. Publications—Printing	5,000	6,000	6,000
Total Rs.	71,199	40,511	37,570
II. *SPINNING LABORATORY.*			
1. Spinning Master (950)			
Salary	11,938	11,400	11,400
Provident Fund..	995	950	950
Furniture Allowance	200	200	200
2. Electrician (100-10-200)			
Salary	2,010	2,010	2,130
Provident Fund..	167	167	177
3. Fitter Jobber (130-10-200)			
Salary	2,040	2,040	2,160
Provident Fund..	170	170	180
4. Clerk (104-4-130):			
Salary	1,256	1,256	1,304
Provident Fund..	104	104	108
5. Contingencies:			
(*a*) Pay of Spinning Operatives	3,074	3,074	3,074
(*b*) Pay of other Menials	1,250	1,250	1,250
(*c*) Municipal Taxes	850	850	850
(*d*) Insurance	700	700	700
(*e*) Annual repairs and road maintenance ..	500	200	500
(*f*) Other contingencies	2,000	2,500	2,000
Total Rs.	27,254	26,871	26,983
III. *RESEARCH AND TESTING LABORATORIES.*			
1. Senior Research Assistant—			
Chemist:			
Salary (350-25-650)	5,900	5,900	6,200
Provident Fund	492	492	517
Carried over Rs.	6,392	6,392	6,717

	Sanctioned Budget 1931-32.	Revised Estimates 1931-32.	Budget 1932-33.
Brought forward Rs. ..	6,392	6,392	6,717
2. Senior Research Assistant— Assistant Technologist (350-25-650)			
Salary	1,200	5,150	5,450
Provident Fund	100	429	454
3. Senior Research Assistants— Physicists (2)—350-25-650:			
Salary	9,500	9,500	10,100
Provident Fund	792	792	842
4. Junior Research Assistant— Physicist (250-25-350):			
Salary	3,000	..	..
Provident Fund	250	..	..
5. Junior Research Assistants (2) (250-25-350-25-500):			
Salary	9,990	5,790	6,740
Provident Fund	833	456	562
6. Statistician (250-25-350-25-500)			
Salary	4,500	4,500	4,800
Provident Fund	375	375	400
7. Temporary Research Assistants (2)	5,130	5,130	3,620
8. Statistical Clerks (2) (90-10-150):			
Salary	2,790	2,790	3,030
Provident Fund	232	232	252
9 Junior Testers (15)—(90-10-150):			
Salary	23,103	23,103	23,960
Provident Fund	1,925	1,925	1,997
10. Instrument Maker (100-10-150):			
Salary	1,800	1,800	1,800
Provident Fund	150	150	150
11. Draughtsman (85-90-10-150):			
Salary	1,730	1,730	1,800
Provident Fund	144	144	150
12. Laboratory Keeper (80-5-120)			
Salary	720	..	960
Provident Fund	60	..	60
13. Temporary Establishment	..	..	810
14. Contingencies:			
(*a*) Pay of Menials	1,340	1,340	1,340
(*b*) Municipal Taxes	1,800	1,800	1,800
(*c*) Insurance	600	600	600
(*d*) Library	2,000	2,000	2,000
(*e*) Annual Repairs	1,500	100	1,000
(*f*) Other contingencies	1,500	1,500	1,500
(*g*) Apparatus	5,000	5,000	5,000
Total Rs.	88,456	82,728	87,894
IV. *RESERVE*.	5,000	..	5,000
I. Superintendence	71,199	40,511	37,570
II. Spinning Laboratory	27,254	26,871	26,983
III. Research and Testing Laboratories	88,456	82,728	87,894
IV. Reserve	5,000	..	5,000
GRAND TOTAL RS. ..	1,91,909	1,50,110	1,57,447

APPENDIX XV.

SUBJECT 19.—*Agricultural Research—Report of the Agricultural Research Sub-Committee.*

The Sub-Committee considered interim Progress Reports on the following schemes which commenced work during the year :—

(1) Surat Boll-worm Propaganda Scheme,

(2) Madras Pempheres and Physiological Research Scheme,

(3) Khandesh (Banilla) Cotton Seed Distribution Scheme,

(4) Erection of a Ginnery at Lyallpur,

(5) Sind Seed Distribution Scheme.

These reports were called for to keep the Sub-Committee in close touch with developments since the schemes commenced. A full report on each will be considered at the July meeting. The reports were approved.

2. The Sub-Committee considered a letter received from the Director of Agriculture, Madras, regarding an extension of one year to the scholarship period of two years given to Mr. T. R. Narayana Iyer who is now under training at Cambridge in Plant Physiology prior to his taking up the post of Physiologist under the Madras Pempheres and Physiological Scheme. The Sub-Committee considered an extension should be given provided Mr. Iyer's progress is satisfactory during the two years of his scholarship. It also suggests that Mr. Iyer should utilise his long vacations to study on the East Malling Fruit Station the physiological work being carried out there.

3. The Sub-Committee approved of the proposal of the Director of Agriculture, Punjab, to create permanent posts of Assistant Physiologist and Microscopist (combined) and one Laboratory Attendant for six months yearly for four years under the Punjab Botanical Research Scheme. Provision for these posts exists in the Budget and the appointments do not therefore entail an extra grant from the Committee.

4. The Agricultural Research Sub-Committee decided at its last meeting that the final decision regarding the Dharwar Cotton Wilt Research Scheme should be postponed until the present meeting. The Sub-Committee went carefully into the report submitted to the last meeting and decided that the scheme, as such, should close down at the end of the present cotton season. The Sub-Committee also recommends that the work of writing up for publication the results of the research should be undertaken by the Senior Officer in charge of the scheme and that a detailed study of them should be undertaken at the next meeting of the Sub-Committee. The Sub-Committee recommends that a sum of Rs. 2,000 for working expenses for the period April and May 1932 and a further Rs. 4,000 for writing up the results should be earmarked for this scheme from the amount provisionally provided in the Budget.

5. The Sub-Committee considered and approved final reports submitted by Mr. R. N. Gidwani, Research Student, Bombay Presidency, and Mr. Srinagabhushana, Research Student, Technological Laboratory.

6. The Sub-Committee approved of the programme of work drawn up for the following research students :—

Mr. Bhola Nath, Research Student in Plant Breeding, Indore.

Mr. K. R. Dube, Research Student in Economics and Marketing, Nagpur.

It was also decided that Professor Radha Kamal Mukerji of Lucknow University should be asked to revise the programme of work submitted by him for Mr. Brajendra Nath Bhargava, Research Student in Cotton Marketing and Economics. The Director of Agriculture, Bombay, also agreed to draw up a fresh and simplified programme of work for Mr. B. S. Sheshgiri, Research Student in Economics and Marketing, Surat.

7. The Sub-Committee recommends that the rules drawn up by the Punjab Government for the study of agriculture in foreign countries should be made applicable, with the necessary modifications, to Mr. Sant Singh Varma, who was awarded a foreign scholarship at the last meeting of the Committee.

8. The Sub-Committee recommends that as far as possible ex-research students and servants of the Committee should replace on schemes financed by the Committee men lent from Provincial Departments of Agriculture and, secondly, that when new schemes are commenced consideration should be given to qualified and unemployed servants of the Committee or to those whose services are likely to be dispensed with by reason of the early closing down of the scheme on which they are working. It was further decided that a list giving full particulars of such employees should be circulated to all Directors of Agriculture in the hope they may be in a position to absorb them, and that the subject should again come before the Agricultural Research Sub-Committee at its next meeting with a view to devising means for their employment either by scholarships or otherwise.

NEW SCHEMES PROPOSED.

9. The Sub-Committee had before it proposals from the Director General of Commerce and Industry, H. E. H. the Nizam's Government, for the extension of Banilla seed in the district of Aurangabad and was of opinion that sufficient trials of Banilla cotton had not been carried out in Aurangabad District and suggests that further tests should be done for a period of two years before a scheme for seed distribution is considered.

10. In view of the absence of Mr. Pandya, consideration of the seed extension scheme for Gwalior was postponed till the July meeting.

11. The Sub-Committee recommends the extension for two years of the Surat Seed Distribution Scheme which was sanctioned in 1929 for two years in the first place pending a decision regarding the type of cotton to be grown in the Surat District. As a decision on this point has been postponed for two years, the Sub-Committee is of opinion that the distribution of 1027 A. L. F. seed should not be stopped in the meantime. The cost will amount to Rs. 7,800 in the first year and Rs. 7,860 in the second year.

12. The Sub-Committee considered fresh estimates for the Athani Cotton Seed Distribution and Extension Scheme which was sanctioned in 1929 but has been held in abeyance since then. The Director of Agriculture wishes to start this scheme in 1932 and submitted fresh proposals. These were carefully gone into by the Sub-Committee and approved. They entail an expenditure of Rs. 46,757 over a period of five years.

13. The sanctioned period of the Sind Physiological Research Scheme ends in July 1932. The final report on the work will be laid before the monsoon meeting when the question of an extension will also be considered. As it is most undesirable that there should be any break in the work, the Sub-Committee recommends that a lump sum of Rs. 25,000 be provided in the Budget for 1932-33 pending the decision of the Central Cotton Committee regarding the future of the Research Scheme.

14. The Sub-Committee approved of the Revised Budget for the Surat Physiological Scheme, which, it was decided at the last meeting of the Sub-Committee, should close down at the end of the present cotton growing season and the year 1932-33 should be utilised to write up for publication the results of the investigation. The Revised Budget amounts to Rs. 27,613 for the period 1st April 1932 till the end of July 1933 while the previous total was Rs. 53,755.

15. The Sub-Committee approved of the Budget, amounting to Rs. 2,420, submitted by the Director of Agriculture, Bombay Presidency, for writing up the work of the Surat Entomological Research Scheme which closed down in March 1931. At its previous meeting, the Sub-Committee recommended that the Senior Assistant in charge of the scheme should be put on special duty to collect and make ready for publication all the data collected during the eight years of the investigation.

16. At the 1930 monsoon meeting of the Agricultural Research Sub-Committee, the Director of Agriculture, Bombay, was asked to put up proposals for an extensive campaign of clean-up measures to eliminate the Earias Boll-worm in the Surat area. Owing to the political situation in Gujerat, Mr. Main had to modify his original scheme and the Committee sanctioned funds for active propaganda in the area during the present year preparatory to launching the clean-up scheme. Mr. Main placed before the meeting of the Sub-Committee his proposals to give effect to the Committee's intention conveyed above. These were carefully considered and the Sub-Committee recommends that the estimated net cost amounting to Rs. 31,610 should be sanctioned. It also recommends that a further sum of Rs. 20,000 should be placed at the disposal of the Director of Agriculture to be used by him in case of necessity for direct action for the cleaning up of cotton stubbles in neglected fields. The scheme consists in getting cultivators to uproot and destroy all cotton sticks over an area of about 480 sq. miles so as to prevent the carry over of the boll-worm from season to season.

17. The last meeting of the Sub-Committee recommended that the Director of Agriculture, Bombay, should, in consultation with his Government, put up fresh proposals to the Central Cotton Committee regarding the co-ordination of cotton research in the Bombay Presidency as the previous terms offered had failed to attract a suitable officer. Mr. Main's new proposals were considered by the Sub-Committee which recommends that they be accepted. They are that the salary should be Rs. 1,100-50-1,300 basic pay and overseas pay of £30 per mensem, the latter to be given in the event of an officer of non-Indian Domicile being appointed; the appointment to be for five years with no commitments thereafter. The selection of the officer will be entrusted to the Committee as required by Rule 9 (1) (*a*) of the Cotton Cess Rules.

18. Three new cotton breeding schemes for Bombay Presidency were placed by the Director of Agriculture before the last meeting of the Sub-Committee which recommended that "as the success of these schemes will depend to a considerable extent on the supervision given, the sanction of the Central Cotton Committee should be withheld until a Co-ordinating Botanist for Bombay Presidency is appointed." The Sub-Committee considered at this meeting a letter from the Director of Agriculture, Bombay Presidency, asking that the schemes should be re-considered in view of the urgency of the work and the fact that the appointment of a Botanist was doubtful. In view of its recommendation on the subject of a Co-ordinating Botanist for Bombay Presidency given above, the Sub-Committee now recommends that the Central Cotton Committee should finance the following two Cotton Breeding Schemes in the Bombay Presidency for five years at a yearly estimated cost of Rs. 13,000 for the Broach Tract and Rs. 7,000 for the Jalgaon Tract, the Government of Bombay supplying the officer in the latter case. The intention of the first scheme is to produce a wilt resistant cotton of high ginning percentage and good fibre for the newly constituted Nerbudda-Mahi protected zone under the Cotton Transport Act. In the Jalgaon Tract, the object is to procure by breeding a high-yielding wilt-resistant, good spinning cotton to replace Banilla.

19. The Sub-Committee also considered a scheme submitted by the United Provinces Government asking for a grant of Rs. 12,660 spread over a period of two years to provide the necessary staff to undertake an investigation into the cost of growing and marketing cotton in the United Provinces. The Sub-Committee is of opinion that as the question of investigating costings of cotton growing is under discussion between the Central Cotton Committee and the Imperial Council of Agricultural Research, consideration of this scheme should be deferred until a decision is arrived at.

20. The Director of Agriculture, Baroda State, submitted proposals for the entertainment of staff to give a thorough test to 1027 A. L. F. and 1A in Navsari District which were estimated at Rs. 1,700. The Sub-Committee approved of the principle underlying his proposals but considered they were inadequate considering the importance of the work to be done and recommends that the Committee should pay the salary of a good Agricultural Assistant and the necessary contingencies, details of which should be submitted for sanction to the Standing Finance Sub-Committee.

21. The Sub-Committee received for consideration from the United Provinces Government proposals for the extension of the results of the United Provinces Pink Boll-worm investigation, which entail new expenditure of Rs. 3,35,000 over a period of

five years and provision for machinery at a maximum cost of Rs. 6¼ lakhs. The Sub-Committee is convinced that the data collected throughout the investigation prove conclusively that heat treatment of seed will effectively control the incidence of Pink Boll-worm in the United Provinces, and in view of the great loss which is now being experienced both by the grower of cotton and the trade through Pink Boll-worm attack, the Sub-Committee considers that the work should be pressed to the next stage of development which is outlined in the scheme. The Sub-Committee approves of the scheme in general and recommends that provision should be made for the recurring expenditure of Rs. 3,35,000. The Sub-Committee further recommends that the capital outlay amounting to Rs. 6¼ lakhs should be provided as a loan to the United Provinces Government to be repaid within a definite period, to be decided on. The Agricultural Research Sub-Committee makes these recommendations on the understanding that the United Provinces Government will accept responsibility for the repayment of the loan and for continuity of work on the scheme and will, as promised, endeavour to introduce any legislation that may be necessary. The Sub-Committee further recommends that a Special Sub-Committee should be formed consisting of the following members of the Agricultural Research Sub-Committee :—

Sir Joseph A. Kay,

Mr. B. C. Burt,

Mr. D. Milne and

Mr. Chunilal B. Mehta,

to meet the authorised representatives of the United Provinces Government and trade interests in the United Provinces to negotiate with the former on the lines of this report.

[The report was adopted by the Central Cotton Committee subject to the amendment of para 21 on the lines of the discussion under this subject—*vide* page 35].

APPENDIX XVI.

SUBJECT 20.—*Institute of Plant Industry, Indore—Policy to be followed.*
Secretary's Note.

At its last meeting, the Committee considered a report by Dr. B. A. Keen, Director of the Imperial Institute of Agricultural Research, Pusa, on the Institute of Plant Industry, Indore. After a short discussion, it was decided to postpone further consideration to this meeting in order to give the new Director, Mr. F. K. Jackson, an opportunity of acquainting himself with the work being done there and in order that the Committee might have the benefit of his views on the future policy to be followed at the Institute. Copies* of Dr. Keen's Report and of the discussion at the last meeting are attached for ready reference.

2. In order to acquaint recently joined members of the Committee with the history of the Indore Institute, a short precis is given below.

3. In 1922, the Committee resolved that a Central Agricultural Institute for cotton research in some form or another was essential and it decided to recommend to the Government of India that it should be permitted to contribute from its funds to the proposed Plant Breeding Institute at Indore which was then under consideration. The original scheme contemplated a general institute for plant industry to which a number of the Central India States and the Government of India were to contribute jointly. Owing to financial stringency in the Government of India this scheme had to be dropped and in 1923 the Committee approved of and finally received the sanction of the Government of India to a revised scheme for an Institute to be devoted principally to cotton investigations. At the 4th meeting of the Agricultural Research Sub-Committee held in

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* Not printed.

February 1923, it was resolved that "a recurring grant-in-aid for five years and a non-recurring grant for Capital Expenditure should be given for the establishment of an Institute at Indore for cotton research. The Institute should be established essentially for research work on cotton and all other investigations should be entirely subsidiary". The grants sanctioned were Rs. 1,60,000 in the first year and Rs. 40,000 in the second year for Capital Expenditure and for working expenses Rs. 80,000 in the first year and Rs. 70,000 in the second and third years. In the words of the report "from the third year, the receipts of the Institute will be appreciable and the Sub-Committee consider that all such receipts should be utilized by the Institute for its maintenance. This would enable the amount of the Central Cotton Committee's contribution to be reconsidered at the end of three years." This sum of Rs. 80,000 per annum was subsequently raised to Rs. 1 lakh because the Government of India declined to waive the leave and pension contributions of Mr. and Mrs. Howard and because two Indian States at the last moment refused to become contributors. In addition to the original grant of Rs. 2 lakhs for Capital Expenditure, the Committee provided an extra sum of Rs. 33,333 in January 1927 for the completion of roads and buildings on the Farm. The balance of the recurring grant for four years totalling a sum of Rs. 50,203 was also transferred to the Capital grant. At the December 1927 meeting, the recurring grant for 1928-29 was increased to Rs. 1,30,000 and for subsequent years to Rs. 1,15,000 which is the Committee's present contribution. The cost of the Institute to the Committee from the date of its inception to the end of March of this year therefore amounts to :—

Capital Expenditure	.. ..	Rs. 2,83,536.
Recurring ,,	.. ..	Rs. 6,61,140.

4. The programme of investigations on cotton which received the approval of the Central Cotton Committee in 1923 and for which the Institute was started is as given below :—

"The Central India Agency includes two distinct cotton tracts : (*a*) the Malwa plateau (a long staple area) in which the best indigenous cottons are found and where improved types like Cambodia have already given excellent results under cultivators' conditions and (*b*) the low-lying areas adjoining the Central Provinces where short staple cotton of the *Roseum* type is the rule.

The aim of the Indore Institute (as regards cotton investigations) is to provide a centre of research for the black soil tracts. At this centre any problems suggested, either by the Central Cotton Committee or by other workers in India can be taken up. A special effort will be made to create a good library dealing with the various aspects of cotton production for the use not only of workers at the Institute itself but also of other investigators on cotton in India.

While the Institute will always be prepared to consider any useful suggestions as regards problems to be investigated, the following preliminary programme is put forward. This falls into four parts.

(*a*) *BOTANICAL SURVEY.*—Up to the present, little or no attempt has been made in India to isolate, classify and study the unit species which form the framework of the various species and varieties of cotton found on the black soils. It is true that the Indian cottons have been classified and surveyed from the point of view of systematic botany, but this is entirely inadequate for modern work as by this method cottons of very different agricultural value are not distinguished. The work needs to be carried much further and nothing short of the isolation and study of the unit species will meet the case. This work has a direct practical bearing. It will, in all probability, lead to the isolation of useful types for distribution. It will also provide material for the plant breeder and for critical work on the physiology and agronomy of cotton.

(*b*) *PLANT BREEDING.*—Two main practical problems will be taken up at once :—

(1) the creation, establishment and maintenance of an island of long staple cotton on the Malwa plateau. The types isolated will be available for other areas in India and the crop will enable a grade of improved cotton to be established for the mills and for the shippers ;

(2) the improvement of the fibre of the hardy *Roseum* type which is, in all other respects, admirably suited for the low-lying areas of Central India.

In the solution of these questions the inheritance of characters will have to be studied. The results will apply not only locally but will also be of general interest.

(*c*) *THE PHYSIOLOGY OF THE COTTON CROP.*—In order to increase production something more than improved varieties is needed. The new varieties must be provided with suitable conditions for growth. To discover these the physiology of the cotton plant must be studied and the factors which now limit production must be determined. This involves the study of root development, the relations of the root system to the soil type and the influence of factors such as soil moisture, soil aeration and drainage, soil texture and soil temperature on growth. Included in these studies is the discovery of factors which produce the shedding of buds, flowers and bolls. During the course of these physiological studies, the general nutrition of the cotton plant will be considered and how far the yield can be improved by manuring and other methods of soil treatment.

(*d*) *THE INFLUENCE OF ENVIRONMENTAL FACTORS ON THE LINT CHARACTERS.*—Modern industries demand a uniform product. Once this is obtained the purchase of raw material as well as the details of manufacture are simplified. In the case of cotton, any tract which can produce uniform lint will rapidly establish its reputation in the trade. It is well known, however, that the cotton fibre alters in character according to the soil on which it grows and to some extent according to the season. Further work is desirable on this matter with the object of discovering what factors bring about these changes, which varieties are most easily affected and whether any practical remedies exist for improving the uniformity of the fibre of the same cotton. This portion of the work is of direct bearing on the question of the maintenance of grades of cotton for the highest class of spinning in this country."

5. In his report, Dr. Keen states that the problems attacked to-date have centred round some actual agricultural operation or process though some of the work fell into the scientific rather than the practical sphere e.g., plant breeding and physiological studies of cotton. He also gives it as his opinion that the Institute must continue as a demonstration and extension centre and that there should be no idea of initiating fundamental research there.

6. There may be a certain amount of confusion regarding the interpretation of the word 'fundamental' when applied to 'research.' I interpret the Committee's idea of "fundamental research on cotton" as investigations and experiments carried out to give us a thorough and complete knowledge of the Indian cotton plant—physiological, ecological, genetical etc.—and any other problems concerning cotton which can best be tackled at a central institute. In fact, the Committee's interpretation of 'fundamental research' was conveyed in the programme of work sanctioned in 1923 for the Indore Institute. Dr. Keen apparently does not wish even this work to be attempted for he says the Institute should continue as a demonstration and extension centre—not even an experimental centre—and the scientific staff should be analysts and routine workers rather than research specialists.

7. The Committee has first to decide whether it wishes the Indore Institute to be merely a demonstration and extension centre or whether it should carry out research work.

(2) If the latter, is the Committee satisfied with the programme of work laid down in 1923 ? If not, what alterations should be made in it ?

8. The Board of Governors of the Institute will meet at Indore in January and the Committee's views will be considered at that meeting. If it is decided that fundamental research work should be carried out, Mr. Jackson will have to overhaul his present staff and decide whether they are capable of carrying on the work under the new conditions. Extra staff will probably be necessary but this is a matter with which the Board of Governors must deal.

9. In conclusion, I would suggest that the amount of the Committee's contribution to the Institute should be reviewed at next July's meeting when the Director has formulated his plans for staff and equipment.

APPENDIX XVII.

SUBJECT 21.—*Report of the Standing Finance Sub-Committee :—*

(*a*) Balance Sheet.
(*b*) Financial Statement.
(*c*) Revised Estimates—1931-32.
(*d*) Budget—1932-33
(*e*) Auditors' fees.

Four meetings of the Finance Sub-Committee were held since the last meeting of the Central Cotton Committee in July. Mr. Ellis Jones tendered his resignation as representative on the Committee of the East India Cotton Association and his place on the Standing Finance Sub-Committee was filled by Sir Purshotamdas Thakurdas who has been nominated in his stead by the East India Cotton Association.

2. We submit a Balance Sheet of the Committee's Funds and of the Provident Fund as on the 30th September 1931. The accounts have been audited up to the end of October 1931. *Attached will be found a Financial Statement showing the position of the Committee's finances on the 30th November 1931. Rs. 24,01,696-5-3 of our securities are invested in Government Paper and Rs. 6,13,040-10-0 in long-dated Corporation Bonds. The general trade depression and political instability have affected the market value of our holdings which, it will be seen from the Financial Statement, have depreciated by Rs. 3,82,284-3-3. In order to finance all the schemes which are in train, it may be found necessary in the near future to sell some of our stocks at a loss.

3. We submit for approval Revised Estimates of Receipts and Expenditure for the current year. Cotton Cess Receipts up to the end of November amounted to Rs. 3,89,988 as compared with Rs. 4,60,257 for the same period last year. This decrease appears to be due to the diminished export of cotton during the last few months. We have reduced the estimate of cotton cess receipts from Rs. 6½ lakhs to Rs. 6 lakhs. We have, however, raised the figure under interest by Rs. 8,000 and it now stands at Rs. 1,63,000. This additional income is due to the purchase of 6% 1933-36 Taxable Loan and to the refund of Income-tax deducted in the previous year. The total expenditure is now estimated at Rs. 9,13,109-12-0 as against Rs. 10,96,910 in July and the closing balance will now amount to Rs. 29,73,341-7-8. This decrease in expenditure of Rs. 1,83,800 is chiefly due to savings under Administration (Rs. 21,670), Technological Laboratory (Rs. 41,799), Research Studentships (Rs. 28,000), Central Provinces Botanical (Rs. 12,000), and to the fact that several schemes sanctioned did not work for the whole year or at all, e.g., Co-ordination of Cotton Research in Bombay (Rs. 16,481), Madras Pempheres and Physiological (Rs. 7,800), Baroda Root Rot (Rs. 4,000) and Seed Schemes (Rs. 46,590).

4. We submit the 1932-33 Draft Budget for consideration. We have kept the estimates of receipts from cotton cess and interest the same as in the revised estimates. The expenditure proposed for research is subject to amendment after considering the report of the Agricultural Research Sub-Committee. In view of the saving under the head of "Salaries" owing to the death of Mrs. Howard and the retirement of Mr. Howard we recommend that the grant for Indore be provisionally reduced from Rs. 1,15,000 to Rs. 1 lakh per annum. This is subject to revision after the discussion on the future policy of the Institute.

5. We requested the Committee's Auditors—Messrs. Billimoria & Co.—to audit the Books of the Hubli and Gadag Cotton Sale Societies so far as the Committee's contributions to the Seed Schemes were concerned. The audit of the Hubli Society was completed in the month of August while that of the Gadag Society has just been finished and the Auditors' report is awaited. As a result of the Auditors' report on the Hubli Society, we decided to request the Director of Agriculture, Bombay, to exercise supervision over the accounts of these Societies in so far as they pertain to seed distribution. This the Director of Agriculture has agreed to under certain conditions which were approved by us.

6. We considered a letter from the Imperial Council of Agricultural Research regarding the carrying out of an investigation into the cost of growing the staple crops of the country and we agreed that the Committee should bear the proportionate cost for the data collected regarding the cotton crop.

* Not printed.

7. We considered a letter from the Director, Institute of Plant Industry, Indore, asking for the Sub-Committee's approval to transfer a sum of Rs. 15,000 from the balance left unspent in the accounts of the Institute towards the cost of building a permanent camp for cultivators visiting the Institute. We decided that as Mr. Howard had already been refused a grant for this purpose by the Committee, we had no power to overrule that decision but that Mr. Jackson could again bring the subject up before the Committee if he failed to collect the necessary money from the contributing States.

8. We sanctioned an extra allowance of Rs. 100 per mensem to Mr. Md. Afzal who was appointed to take charge of the Punjab Botanical Research Scheme on the departure of Mr. Trought. This allowance will cease when a successor to Mr. Trought takes over charge.

9. We sanctioned the utilisation by the Entomologist to Government of the balance amounting to Rs. 2,026-15-3 under the United Provinces Entomological Scheme for the purpose of demonstration or for further experiments and for dismantling the machinery on the completion of the work.

10. We decided to recommend to all Directors of Agriculture and those responsible for the conduct of the Committee's Research Schemes that we should follow the lead given by the Government of India in the matter of a cut in the salaries of its servants. We decided on this step because the Committee is a Semi-Government body in charge of Trust Funds and because we considered it unfair that some of the Committee's servants, viz., those lent by Local Governments, should suffer the cut while others should not. We also consider that the same principle should apply to those of our servants working in Indian States even though no cut has been made there. This is in order to ensure uniformity throughout.

11. We considered a letter received through the Government of India from a non-official member asking for a revision of the halting allowance permissible to members when attending meetings of the Committee and we decided not to suggest any alterations in the existing rules.

12. We decided to recommend to the Government of India that the probationary period of Mr. Rama Reddi, the Deputy Secretary, should be extended for a period of six months as during the year he was absent on leave and on deputation for a period of seven months

13. We considered a letter from the Director of Agriculture, Punjab, asking for the provision of Mukkadams for the two Research Scholars employed on Economics and Marketing Enquiries, but decided that there should be no change in the Committee's policy in this respect and the request was refused.

14. We also considered a request from the Registrar of Co-operative Societies, Central Provinces asking the Committee to invest some of its funds in the Central Provinces Provincial Co-operative Bank, but were compelled to refuse the request as even the Government of India itself had no power, without obtaining the permission of the Legislative Assembly, to extend the list of Banks in which Trust Funds can be invested.

15. We agreed to fix the salary of the Botanist for the Punjab Botanical Research Scheme, sanction for which was accorded at the last meeting of the Committee, at Rs. 1,100-50-1, 300 basic pay and overseas pay at £30 p.m., the latter to be given if the candidate selected is of non-Asiatic domicile.

16. We recommend that Messrs. S. B. Billimoria & Co., be reappointed auditors for the Committee's accounts for the year 1932-33 at a remuneration of Rs. 1,000 per year.

17. We sanctioned for the Technological Laboratory expenditure amounting to Rs. 1,636-12-0 for two hand gins and for a 1 H. P. motor for the Platt Bros. Ring Frame presented to the Laboratory by Messrs. Nowrosji Wadia & Sons to be met from the balance under the Capital grant for the Technological Laboratory.

18. The Committee's representatives on the Governing Body of the Indore Institute referred to the Standing Finance Sub-Committee a letter received from the Director, Institute of Plant Industry, Indore, asking for the utilisation of Rs. 40,000 lying in balance in the Institute's current account towards the construction of quarters for the staff. Up to date free quarters for the staff were provided in the Thuggi Jail, but these are now required by the State. We decided to recommend to the Board of Governors that an investigation should be made into the estimate of cost which appeared to be high and in the event of quarters being constructed rent at the rate of 10% of the occupants' salary should be recovered from them.

Balance Sheet as at 30th September 1931.

RECEIPTS.	Rs.	a.	p.	Rs.	a.	p.
Cotton Cess Receipts				77,81,174	2	10
Interest account—						
Amount received on investments ..	9,68,674	0	6			
Add—Refund of income-tax deducted on interest	11,626	1	0			
	9,80,300	1	6			
Less—						
(1) Interest paid in advance at the time of purchasing Government Securities (since recovered) and Bank's commission	40,152	1	5			
(2) Income tax deducted on interest	17,585	5	0			
(3) Interest credited to the Committee's Provident Fund Account	4,886	6	2			
(4) Bank's withdrawal charges for securities sold	1,690	8	0			
(5) Provision for Sinking Fund ..	1,735	7	0			
	66,049	11	7	9,14,250	5	11
Carried over ..	....			86,95,424	8	9

EXPENDITURE.	Rs.	a.	p.	Rs.	a.	p.
I. A. Administration				11,24,140	15	6
B. Improvement of Cotton Marketing				72,739	13	7
C. *Seed Distribution and Extension Schemes—*						
(1) Hubli	11,779	14	0			
(2) Gadag	17,588	8	3			
(3) Khandesh	19,488	0	0			
(4) Surat	12,472	0	0			
(5) Hyderabad	6,666	10	8			
(6) Madras	2,835	0	0			
(7) Sind	14,164	0	0			
(8) Central Provinces ..	17,057	2	6			
(9) Experimental Ginnery at Lyallpur ..	12,250	0	0			
				1,14,301	3	5
D. Printing and Propaganda ..	....			668	10	0
II. *TECHNOLOGICAL RESEARCH—*						
(1) *Technological Laboratory—*						
A. Capital Expenditure—						
(i) Lands and Buildings..	3,55,797	9	11			
(ii) Machinery	83,023	10	1			
(iii) Freight	7,502	2	8			
(iv) Apparatus and Equipment	41,558	3	7			
(v) Machinery Workshop..	5,789	8	3			
B. Working Expenses ..	9,90,672	14	2			
(2) Provincial	21,982	6	0			
				15,06,326	6	8
III. Research Studentships	.....			1,89,051	13	9
Carried over ..	....			30,07,228	14	11

	Rs.	a.	p.	Rs.	a.	p.
Brought forward ..				86,95,424	8	9
Profit on conversion of 6% Tax Free Bonds into 5% Taxable Loan ..				5,000	0	0
Sinking Fund Account				1,735	7	0
Miscellaneous Receipts				12,443	1	11
Suspense Receipt—						
Amount received from Dr. Pendleton for supply of cotton seeds	25	0	0			
Less—Charges paid for seeds	5	12	0	19	4	0
Grand Total				.. 87,14,625	5	8

		Rs.	a.	p.	Rs.	a.	p.
	Brought forward ..				30,07,228	14	11
	AGRICULTURAL RESEARCH GRANTS—						
IV.	*Bombay*—						
	(a) Surat Physiological ..	2,12,204	10	9			
	(b) (i) Surat Boll-worm Research	1,15,721	6	8			
	(ii) Surat Boll-worm Propaganda	18,729	9	0			
	(c) Dharwar Wilt	1,70,567	7	7			
	(d) Khandesh Cotton Breeding ..	24,177	8	0			
	(e) Co-ordination of Cotton Research	314	4	0			
V.	*Madras*—						
	(a) Herbaceum	80,964	9	5			
	(b) Pompheres & Physiological ..	2,927	12	7			
	(c) Fodder Cholam	2,264	10	0			
VI.	*Punjab*—						
	(a) Botanical	3,28,342	13	5			
	(b) Entomological	91,942	10	4			
	(c) White Fly	5,240	10	0			
VII.	Central Provinces	2,28,423	15	1			
VIII.	United Provinces	1,29,373	11	3			
IX.	Institute of Plant Industry, Indore	10,06,343	12	0			
X.	Sind	95,921	6	3			
XI	*Burma*—						
	(a) Capital	2,906	15	5			
	(b) Cotton Improvement ..	4,074	12	0			
XII.	Hyderabad—(a) Botanical ..	53,736	6	5			
	(b) Cotton Survey ..	1,580	0	0			
XIII.	Bikaner	19,141	0	0			
XIV.	Baroda Root Rot	....					
					25,94,899	14	2
XV.	Loans Recoverable a/c				12,805	0	0
	Suspense a/c				2,167	4	0
	By Balance				30,97,524	4	7
	Grand Total ..				87,14,625	5	8

Balance Sheet as at September 30th 1931.

Provident Fund Account.

RECEIPTS.	Rs. a. p.	Rs. a. p.
Subscribers' contributions	83,399 3 5	
Less.—Refunds to subscribers resigned ..	12,250 12 1	
		71,148 7 4
Committee's contributions	71,674 10 8	
Less.—Payments to subscribers resigned.	10,304 4 7	
		61,370 6 1
Recoveries against advances		11,399 5 0
Interest received on investments, 1931-32	1,903 7 5	
Interest received on advances	8 2 0	
		1,911 9 5
		1,45,829 11 10
Deductions.		
(1) Advances made to date	16,636 2 0	
(2) Interest credited to subscribers' a/c up to 31-3-31 ..	1,696 14 0	
(3) Interest paid to subscribers resigned this year ..	2,681 10 6	
Carried over..	21,014 10 6	1,45,829 11 10

EXPENDITURE AND INVESTMENTS.		Rs. a. p.	Market rate.	Market value. Rs. a. p.
By expenses for withdrawal charges for securities transferred to I. C. C. C. a/c P. F.		171 10 0		
Cost of printing Provident Fund forms		8 8 0		
		180 2 0		
By Balance as under.—				
	Face value.			
(1) 3½% G. P. Notes ..	Rs. 85,600	59,754 3 1	52/8	44,940 0 0
(2) 5% 1939/44 Taxable Loan	,, 25,600	24,606 15 6	86	22,016 0 0
(3) 6% 1933/36 Taxable Loan	,, 29,900	30,025 2 0	96	28,704 0 0
(4) 4% 1934/37 Taxable Loan	,, 2,000	1,795 0 0	86	1,720 0 0
		1,16,181 4 7		97,380 0 0
				Depreciation loss therefore is Rs. 18,801-4-7
Fixed deposit with the P. & O. Banking Corporation due 11-11-31 @5%		7,000 0 0		
Balance in current a/c with the Imperial Bank of India on 30-9-31		1,289 9 6		
Carried over ..		1,24,651 9 1		

	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.
Brought forward..	21,014	10	6	1,45,829	11	10			
(4) Advance interest paid for Government Paper purchased during this year	139	4	9						
(5) Income tax deducted from Interest on Government Paper purchased this year	20	11	6						
(6) Bank's Commission and cost of stamps	4	1	0						
				21,178	11	9			
							1,24,651	0	1

	Rs.	a.	p.
Brought forward..	1,24,651	0	1
	1,24,651	0	1

REVISED ESTIMATES, 1931-32—ALL HEADS.

(As passed by the Indian Central Cotton Committee on the 15th December 1931.)

RECEIPTS.

	Rs. a. p.	Rs. a. p.
To Opening Balance ..	31,20,951-3-8	
Loans recoverable account.	12,805-0-0	
		*31,33,756 3 8
Cotton cess receipts		6,00,000 0 0
Interest account		1,63,000 0 0
Miscellaneous receipts ..		2,500 0 0
Carried over		38,99,256 3 8

*Audited closing balance 1930-31.

EXPENDITURE.

	Sanctioned Budget.	Estimated expenditure.	Savings + Deficits —
	Rs.	Rs. a. p.	Rs. a. p.
I. A. Administration	1,57,510	1,35,840 0 0	+21,670 0 0
B. Improvement of Cotton Marketing.. ..	5,000	5,000 0 0	....
C. *Seed Distribution and Extension Schemes.*			
(1) Bombay—			
(*i*) Hubli	8,560	8,560 0 0	....
(*ii*) Gadag	9,240	9,240 0 0	....
(*iii*) Gadag supplementary	7,612	7,612 0 0	....
(*iv*) Haveri	6,238	....	+6,238 0 0
(*v*) Athani	4,238	....	+4,238 0 0
(*vi*) Bailhongal	4,285	....	+4,285 0 0
(*vii*) Surat	7,000	6,700 0 0	+300 0 0
(*viiii*) Khandesh..	62,068	38,638 0 0	+23,430 0 0
(2) Madras	3,300	2,900 0 0	+400 0 0
(3) Punjab	18,125	18,125 0 0	....
(4) Sind	31,000	26,300 0 0	+4,700 0 0
(5) Hyderabad	5,000	3,500 0 0	+1,500 0 0
(6) Central Provinces and Berar	34,518	33,018 0 0	+1,500 0 0
D. Printing and Propaganda	6,000	7,200 0 0	−1,200 0 0†
II. *Technological Research.*			
(1) Technological Laboratory :—			
A. Capital Expenditure	....	1,636 12 0	−1,636 12 0‡
B. Working Expenses	1,91,909	1,50,110 0 0	+41,799 0 0
(2) Provincial	12,648	12,648 0 0	....
III. Research Studentships	40,000	12,000 0 0	+28,000 0 0
Carried over	6,14,251	4,79,027 12 0	+1,35,223 4 0

† Additional provision required.

‡ Met from savings of past years.

RECEIPTS.	Rs. a. p.	EXPENDITURE.	Sanctioned Budget.	Estimated expenditure.	Savings + Deficits −
			Rs.	Rs. a. p.	Rs. a. p.
Brought forward ..	38,99,256 3 8	Brought forward ..	6,14,251	4,79,027 12 0	+1,35,223 4 0
		Agricultural Research Grants.			
		IV. Bombay :—			
		(a) Surat Physiological	33,630	33,330 0 0	+ 300 0 0
		(b) Surat Bollworm Propaganda ..	31,480	31,480 0 0	....
		(c) Dharwar Wilt	25,085	25,085 0 0	....
		(d) Khandesh Cotton Breeding	5,703	5,768 0 0	−65 0 0*
		(e) Co-ordination of Cotton Research ..	19,731	3,250 0 0	+16,481 0 0
		V. Madras :—			
		(a) Herbacoum	8,900	9,011 0 0	−111 0 0*
		(b) Pomphores and Physiological ..	22,400	14,600 0 0	+7,800 0 0
		(c) Fodder Cholam—Recurring	1,572	1,760 0 0	−188 0 0*
		,, ,, —Non-recurring ..	....	40 0 0	−40 0 0*
		VI. Punjab :—			
		(a) Botanical Working Expenses ..	58,180	57,280 0 0	+900 0 0
		(b) Entomological	18,500	15,100 0 0	+3,400 0 0
		(c) White Fly	11,360	9,960 0 0	+1,400 0 0
		VII. Central Provinces	44,619	32,619 0 0	+12,000 0 0
		VIII. United Provinces :—			
		Recurring grant for staff	6,706	7,206 0 0	−500 0 0‡
		IX. Institute of Plant Industry, Indore ..	1,15,000	1,15,000 0 0	....
		X. Sind	27,492	27,492 0 0	....
		XI. Burma Cotton Improvement	4,104	4,104 0 0	....
		XII. Hyderabad :—			
		(a) Botanical	26,300	26,300 0 0	....
		(b) Cotton Survey	5,000	3,600 0 0	+1,400 0 0
		XIII. Bikaner Working Expenses	7,640	5,840 0 0	+1,800 0 0
		XIV. Baroda Root Rot	9,257	5,257 0 0	+4,000 0 0
		Total Expenditure ..	10,96,910	9,13,109 12 0	+1,83,800 4 0
		XV. Loans recoverable (but considered doubtful). Hubli .. Rs. 5,513 Cadag .. Rs. 7,292		12,805 0 0	
		By Balance		29,73,341 7 8	
Grand Total ..	38,99,256 3 8	Grand Total ..		38,99,256 3 8	

* To be met from past savings. † To be met from grant for 1932-33.

REVISED ESTIMATES, 1931-32.

Provident Fund Account.

RECEIPTS.	Rs. a p.	Rs. a. p.	EXPENDITURE.	Rs. a. p.
To Opening Balance as on 1-4-31 ..		1,34,415 5 0	By payment to subscribers (resigned) of their amount together with the Committee's contribution and interest	50,256 0 0
Subscribers' contributions	19,450 0 0		By refunds to Indian Central Cotton Committee of the Committee's contributions disallowed to subscribers resigned..	2,960 0 0
Committee's contribution	19,450 0 0	38,900 0 0	By expenditure for withdrawal of securities for transfer from Trustees' names to the Committee P. F. account and for stationery (printing of books and forms)	195 0 0
Recoveries against advances ..		6,560 0 0		
Interest receivable		6,800 0 0		
			By Balance	1,33,264 5 0
	Grand Total ..	1,86,675 5 0	Grand Total ..	1,86,675 5 0

BUDGET, 1932-33—ALL HEADS.

(As passed by the Indian Central Cotton Committee on the 15th December 1931.)

RECEIPTS.	Rs.	a.	p.	Rs.	a.	p.
To Opening Balance	29,73,341	7	8			
Loans recoverable account	12,805	0	0			
				29,86,146	7	8
Cotton Cess Receipts				6,00,000	0	0
Interest account				1,63,000	0	0
Miscellaneous receipts				1,500	0	0

EXPENDITURE.	Rs.	Rs.	a.	p.
I. A. Administration		1,52,410	0	0
B. Improvement of cotton marketing		15,000	0	0
C. *Seed Distribution and Extension Schemes* :—				
(1) Bombay :—				
(I) Hubli	8,560			
(II) Gadag	9,240			
(III) Gadag supplementary	4,612			
(IV) Haveri	2,800			
(V) Athani	2,980			
(VI) Bailhongal	4,285			
(VII) Surat	7,800			
(VIII) Khandesh	52,068			
(2) Madras	3,300			
(3) Sind	31,000			
(4) Hyderabad State	5,000			
(5) Central Provinces	15,841	1,47,486	0	0
D. Printing and Propaganda ..		15,000	0	0
II. *Technological Research*:—				
(1) Technological Laboratory Working Expenses		1,57,447	0	0
(2) Provincial		12,275	0	0
III. Research Studentships		20,000	0	0
Agricultural Research Grants.				
IV. Bombay :—				
(a) Surat Physiological		21,113	0	0
(b) Surat Boll-worm :—				
(I) Writing up scheme ..		2,420	0	0
(II) Propaganda		31,610 / 20,000	0	0
(c) Dharwar Wilt		6,000	0	0
(d) Cotton Breeding Schemes in Bombay Presidency		20,000	0	0
(e) Co-ordination of Cotton Research		25,191	0	0

		Rs.	a.	p.
V.	Madras :—			
	(a) Herbaceum	9,200	0	0
	(b) Pomphores and Physiological	22,400	0	0
	(c) Fodder Cholam—Recurring	1,644	0	0
VI.	Punjab :—			
	(a) Botanical—Working Expenses	59,790	0	0
	(b) Entomological	18,500	0	0
	(c) White Fly	11,140	0	0
VII.	Central Provinces	46,119	0	0
VIII.	United Provinces—Recurring grant for staff	4,269	0	0
IX.	Institute of Plant Industry, Indore	1,00,000	0	0
X.	Sind	25,000	0	0
XI.	Burma—Cotton Improvement	6,408	0	0
XII.	Hyderabad :—			
	(a) Botanical	26,462	0	0
	(b) Cotton Survey	5,000	0	0
XIII	Bikaner—Working Expenses	7,640	0	0
XIV	Baroda (a) Root Rot	8,860	0	0
	(b) Comparative tests of 1027 and 1A cottons	1,700	0	0
	Total Expenditure	10,00,084	0	0
XV.	Loans recoverable but considered doubtful :— Hubli Rs. 5,513 0 0 Gadag Rs. 7,292 0 0	12,805	0	0
	By Balance	27,37,757	7	8
	Grand Total	37,50,646	7	8

BUDGET, 1932-33—ALL HEADS.

Provident Fund Account.

	Rs.	a.	p.		Rs.	a.	p.
To Opening Balance as on 1-4-32	1,33,264	5	0	By Balance ..	1,67,575	5	0
Subscribers' contributions ..	16,420	0	0				
Committee's contributions ..	16,420	0	0				
Recoveries against advances ..	1,471	0	0				
Total ..	1,67,575	5	0	Total ..	1,67,575	5	0

APPENDIX XVIII.

SUBJECT 22.—*Provincial Cotton Committees—Abolition of the United Provinces Provincial Cotton Committee—Note by Secretary.*

At its 67th meeting held in August 1931, the Local Sub-Committee considered a copy of a letter received from the United Provinces Government to the Director of Agriculture stating that in view of the imperative need for economy, the Government had decided not to reconstitute for the present the Provincial Cotton Committee the term of which expired in May 1930. The Local Sub-Committee decided that as these Provincial Cotton Committees were capable of performing very useful work, the question should come up for a general discussion at this meeting of the Central Cotton Committee to see if some enthusiasm could not be instilled into them.

The decision of the United Provinces Government seems to be at variance with their intentions because from the Report of the Upper India Chamber of Commerce, I find that that body had been consulted, the Government proposing provisionally to reconstitute the Committee for a further period of 2 years in order to see whether greater interest was taken in its proceedings. Government considered that two meetings a year should be held at Cawnpore.

In 1924, the United Provinces Government arrived at a similar decision but on a reference from the Upper India Chamber of Commerce, the Central Cotton Committee passed a resolution endorsing the letter sent to the United Provinces Government by the Upper India Chamber of Commerce protesting against the abolition of the Provincial Cotton Committee and the United Provinces Government reconstituted it.

The MacKenna Committee of 1919 made the following recommendation regarding these Provincial and Local Cotton Committees and amplified this in para 263 of their report:—

'In order to carry out its functions, the Committee would act through and with Provincial Committees and local sub-committees. Such Committees would be formed in all the provinces in which cotton is grown except Bihar and Orissa and Assam. In view of the special circumstances of Burma, the Provincial Committee in that province would be the advisory body in regard to the licensing of ginning and pressing factories."

Formation of Provincial and Local Committees.

Para. 263.—"To enable the Central Committee to keep in touch with what is happening in the various provinces, we regard it as necessary that it should work through and with Provincial Committees and local sub-committees. The main functions of these committees would be to provide the Central Committee with full information in regard to all points with which the latter was concerned and to investigate complaints in regard to malpractices in ginning and pressing factories in accordance with the scheme we have proposed in Chapter XVI. The Provincial Committee should, in our opinion, consist of representatives of all branches of the cotton industry as well as of the Agricultural Department. The number of members might vary according to the circumstances of the individual provinces but should not be less than five or more than nine and the Director of Agriculture would be a suitable chairman. The local sub-committees should be formed in suitable centres at the discretion of the Provincial Committee and their composition should follow the lines of the latter, though the number of members would, as a rule, be smaller and should not be less than three or more than five. The Deputy Director of Agriculture should invariably be an ex-officio member of all the sub-committees formed in his circle. Any expenditure incurred by the Provincial or local committees should be met by a grant from the funds of the Central Committee.

We would add that, in present conditions, the formation of Provincial and local committees is not necessary in Bihar and Orissa and Assam, where cotton is an unimportant crop and there are no ginning or pressing factories. Although we have not provided for the direct representation of Bengal, the North-West Frontier Province, Ajmer-Merwara and Delhi on the Central Committee, we think it desirable that Provincial Committees, which would work on the same lines as elsewhere, should be formed in those provinces though it may not be necessary to have local sub-committees in addition. In view of the difficulty in regard to distance, we have also not provided for the representation of Burma on the Central Committee though we think that, if

the area under cotton in Burma increases, such representation would be advantageous as it would enable the Agricultural Department of that province to get the benefit of Indian experience. We are of opinion that it is desirable that our recommendations in regard to the licensing of gins and presses should apply to Burma and that a Provincial Committee and, if necessary, local sub-committees should be formed but we would recommend that, in the special circumstances of the province, the Provincial Committee should be the body which should deal finally with complaints in regard to malpractices in gins and presses and should, if necessary, recommend the withdrawal of licenses to the Local Government. We see, however, no reason why, in regard to most of the other functions of the Central Committee, the Provincial Committee in Burma should not work in conjunction with it.

As we have already stated, the functions we have assigned to the Central Committee are almost entirely advisory. We should, perhaps, here mention that we circulated confidentially to Directors of Agriculture, and leading associations and individuals connected with the cotton trade, a scheme differing somewhat in essentials from that outlined above and that the proposals now put forward have been formulated after careful consideration of the valuable criticisms received. It was represented to us in some quarters to the opinion of which we attach great weight, that the functions of the Committee should be executive as well as advisory, that it should, in short, dictate the policy which should be followed in the various cotton tracts and should also be the authority in all matters relating to the licensing of gins and presses. Whilst we fully recognize the force of the arguments in support of this view, we have been unable to accept it as we consider that the difficulties in the way of entrusting executive functions to the Central Committee are insuperable. In the first instance, such a course might make it difficult, if not impossible, to secure the co-operation of the Native States in carrying out our recommendations, a point to which, as already stated, we attached very great importance. The second difficulty we feel is that dictation of policy to the various Agricultural Departments by a body outside the province might lead to undesirable friction and that the ultimate authority both in this respect and in regard to the licensing of gins and presses must be the Local Government."

From the copies of Minutes received in this office I find that the several Provincial and Divisional Cotton Committees in India have met as follows during the last six years :—

Punjab	5 times	Sind Divisional Cotton Committee	5 times.
Madras	3 „	Gujerat	5 „
C. P. & Berar	3 „	Khandesh	4 „
Bengal	Once	Dharwar	Once.
Tuticorin Cotton Sub-Committee	Once.		

I am sure however that the Committee has not received copies of the Minutes of all the meetings held.

At its first meeting held in July 1921, the Committee considered it desirable that the Secretary, Indian Central Cotton Committee, should be invited to attend meetings of Provincial Cotton Committees when matters of general interest were up for discussion and the Directors of Agriculture, Central Provinces, Bombay, Punjab, United Provinces and Burma were circularized in the matter. I would therefore suggest that this previous decision be implemented and that the Secretary of the Central Cotton Committee should be given an opportunity of attending Provincial Cotton Committee meetings in order to keep in touch with the general work of cotton improvement being carried out in the Provinces. I would also suggest that when these Provincial Committees become really live bodies, all new schemes for help from the Central Cotton Committee should first be considered by them. In this way the Central Cotton Committee will get the benefit of the views of all the local cotton interests affected by the new scheme. A Provincial Committee being much more in touch with local conditions should be of considerable help in aiding the Agricultural Department to lay down and carry into effect a policy of general improvement.

APPENDIX XIX.

SUBJECT 23.—*Representation of Sind cotton growers on the Indian Central Cotton Committee.*

Secretary's note.

The following letter from the Chief Agricultural Officer, Sind, is for consideration :—

"Copy of letter No. 351-A, dated the 24th November 1931, from the Chief Agricultural Officer in Sind, Karachi, to the Secretary, Indian Central Cotton Committee, Bombay.

I have the honour to state that, at the meeting of the Advisory Committee, Lloyd Barrage, held on 18th October, 1931, a resolution was passed to the effect that an additional member, representing the cotton growers of Sind, should be added to the membership of the Indian Central Cotton Committee. Under Section 4 (*viii*) of the Indian Cotton Cess Act of 1923, two persons representing the cotton growing industry can be nominated to the Central Cotton Committee by each of the Local Governments of Madras, Bombay, the United Provinces, the Punjab and the Central Provinces. It is a fact that, under this Section 4 (*viii*), the Bombay Government have, in the past, nominated a cotton grower of Sind as one of the two cotton growers' representatives from the Bombay Presidency but, in view of the great importance of the cotton growing industry in Sind and the enormous development of cotton cultivation anticipated after the establishment of perennial irrigation under the Lloyd Barrage and Canal Systems, it is most desirable that the cotton growers of Sind should have statutory and permanent representation on the Indian Central Cotton Committee. Accordingly, I have the honour to request that this letter be placed before the forthcoming meeting of the Committee in December, 1931, and a resolution moved to the effect that the Government of India be requested to so amend Section 4 (*viii*) of the Indian Cotton Cess Act as to include a representative of the cotton growers of Sind, nominated by the Commissioner in Sind, on the Indian Central Cotton Committee."

Before the appointment in April 1929 of Rao Saheb C. S. Shirahatti as one of the two cotton growers' representatives for Bombay Presidency, one post had always been filled by a member from Sind under Section 4 (*viii*) of the Indian Cotton Cess Act.

Up to March 1929, one appointment under Section 4 (*xi*) (additional member) was filled by the Deputy Director of Agriculture, Gujerat, Surat, but on the termination of his office in March 1929, the post was held by an Agricultural Officer from Sind viz. Mr. K. I. Thadani, followed by Mr. W. J. Jenkins. Sind has thus always been represented either by an official or by a non-official.

The Sind growers should, I consider, be represented on the Committee and it is for consideration whether it would not be better to recommend that one of the two posts earmarked for Bombay Presidency should be reserved for Sind instead of adding to the number of members.

APPENDIX XX.

SUBJECT 24.—*Cotton Statistics—Comparison of Cotton Press Returns with Cotton Forecasts.*

Secretary's Note.

The comparison of the Press Returns with Government Forecasts has always in the past been done at the July meeting but at the request of the Director of Agriculture, Bombay Presidency, this item will, in future, be included in the cold weather Agenda.

The attached note and statement analyse the figures for the 1930-31 season, and they are provided to help the officers responsible for framing Government Forecasts to lay their finger on the discrepancies which occur between the two sets of figures. The latest published figures of the Rail-borne Trade Returns are for the month of July and until the figures for August are available these statistics cannot be used to aid in this comparison.

Since press returns are furnished from all Provinces and States known to have pressing factories except Assam, Gwalior, Patiala, Mysore, Cutch, etc., the total cotton production of which is estimated to be just over 200,000 bales, it has been considered advisable to group Provinces and States geographically in the table, instead of showing British India and Indian States separately in two groups as has been done in the past.

BOMBAY.

It has been noticed in the past that for a proper comparison of the forecasts with the press returns the crop of Baroda State should be considered along with that of Bombay. In the attached statement, therefore, the figures relating to the Baroda State have been brought under the head "Bombay", though in the All-India Forecasts, Baroda is shown separately from Bombay Presidency.

The estimated crop given in the statement for British India, the Baroda State and those Indian States which have not so far instituted cotton press returns has been taken from the April 1931 cotton forecasts of the Bombay Presidency and the Baroda State. In the case of the other Indian States the estimated crop figures given are not the April 1931 estimates, but revised estimates recently communicated by the Director of Agriculture, Bombay Presidency. The reason for adopting these figures is that the published April forecasts do not show separate figures for these States.

Before proceeding with the comparison of the two sets of figures it has to be pointed out that the revised estimates for some of the States referred to in the previous paragraph are considerably higher than the estimates in the April forecast, since the estimated crop of 1,329,000 bales in the April forecast is now raised to 1,448,371 bales, thus bringing the forecast nearer the pressed crop of 1,433,456 bales.

Subject to the general position stated above, the following may be noted in a detailed examination of the two sets of figures for each block.

In British Indian Gujerat there is, as usual, a large excess of cotton pressed over the estimated crop, but this is completely wiped out by the reverse position in the Gujerat States, the sum total being a deficit of 59,401 bales pressed as compared with the estimated crop. The estimated crop includes the loose cotton consumed by mills and for domestic purposes while the press returns include imports from Rajputana and Central India. Adjustments must be made for these.

In the North Deccan block the cotton pressed is in excess of the estimated crop by 38,891 bales. The usual explanation given for the excess in this block is the import of lint and *kapas* from Hyderabad and Central India. It will be noticed that in the Hyderabad State there is very little deficiency while in the adjoining Central India States the cotton pressed is in excess of the forecasted crop. Hence if the reason given for the excess in the North Deccan block is as being due to import an adjustment will be necessary in the figures for Hyderabad and Central India.

In the East Deccan block the cotton pressed is less than the forecast crop by 10,117 bales. This may be due to village consumption, but there is, usually, substantial import of *kapas* and lint into this block from Hyderabad. Whether such was the case during 1930-31 has yet to be ascertained.

In the West Deccan block, the cotton pressed is less than the forecast crop by 39,728 bales. Last year it was noticed that there were considerable exports of cotton from this block to Hyderabad and Mysore States and also to Madras. If such export is in the form of *kapas* and unpressed lint there is an explanation for this deficit.

In Sind, the excess of cotton pressed is 55,440 bales, all of which is not likely to be due to imports. There is reason to suspect that the crop has been underestimated.

In the Punjab, the forecast crop is, as usual, much less than the cotton pressed. The usual explanation for this is the existence of non-reporting States in the Punjab, and the difference in the bale-weights used in the forecasts and the cotton press returns. So far as the statement at present under consideration is concerned, the inclusion in the forecast of the figures relating to the few minor non-reporting States can be put as a counter balance against the crop pressed in the Malerkotla and Patiala States, which are known to have presses but have not yet begun to compile cotton pressed returns. Nor can the discrepancy be explained away as due to the difference in the bale weights of the two sets of figures. For British Punjab the equivalent number of 400 lbs. bales for 817,553

running bales shown in the press returns is, according to the statement published in the Indian Trade Journal of October 1, 1931, only 29,440 bales less than this figure. Even allowing for this, there remains an excess of nearly one lakh bales of pressed cotton. In the circumstances it can be assumed that the crop has been underestimated by about this figure. Further, the adjoining blocks of Sind and Rajputana also show excesses. Therefore if the import of *kapas* and lint from these places is given as an explanation for the high press returns in the Punjab, an adjustment will be necessary in the figures for those two blocks.

In the Rajputana block, which comprises the Indian States included in the Agency and Ajmer-Merwara, the number of bales pressed was 34,321 more than the forecast crop. This excess is in spite of the fact that cotton press returns were not available during the season from the States of Bundi, Kotah and Kishengarh.

In the Central India block there is a deficit of 61,968 bales. It will be noticed, however, that this is due to the fact that cotton press returns have not yet been instituted in the Gwalior State, the estimated production of which is 103,000 bales.

In the United Provinces there is as usual, a deficit, which may be due to extra-factory consumption.

There is a large excess in Bengal.

In the Central Provinces and Berar there is an excess of 185,796 bales. Together with the loose cotton received in mills the excess amounts to just over two lakhs bales. The excesses in the Nagpur and Berar blocks require to be examined.

In the Hyderabad State the cotton pressed is less than the forecast crop, but in view of the fact that the excesses in almost all the adjoining British tracts are generally represented as being partly due to the imports of *kapas* and lint from the State, the real position with regard to the accuracy of the Hyderabad forecast will not be ascertained until figures relating to the road movement of cotton are available.

In the Madras Presidency the season runs from February to January, and hence the crop of 1930-31 can be compared only with the press returns of February 1931 to January 1932. No comparison is therefore possible at this stage.

The position may now be summarised as follows :—

1930-31 Cotton Crop of India.

(In thousands of bales—estimated crop in bales of 400 lbs. nett and press returns in running bales).

Total Indian cotton crop as estimated in the April 1931 forecast				4,820
Deduct the crops of :—				
Burma—which is separate			87	
Madras—season not over			417	
			504	
Gwalior ..	Areas which are known to have pressing factories, but press returns from which are not available.	103		
Cutch		39		
Patiala ..		21		
Mysore ..		10		
Radhanpur ..		6		
Kotah		6		
Kishengarh ..		3		
Dewas J. B. ..		3		
Bundi ..		1		
Assam ..		15		
Malerkotla ..		not known		
			207	
				711
Estimated crop with which press returns are comparable				4,109

No. of bales pressed in British India excluding Madras and Burma ..	3,389
No. of bales pressed in Indian States	1,192
	4,581
No. of bales of loose cotton received in mills in the Punjab, Bombay, United Provinces and Central Provinces & Berar	93
	4,674
Excess of cotton pressed and loose cotton received in mills over the estimated crop of 4,109 bales	565

From the above, it would appear that the crop had been underestimated by about half-a-million bales. To this should be added the quantity of cotton that is used for domestic purposes.

The commercial crop of 1930-31 may be stated as follows :—

Exports	3,729,000 bales.
Mill consumption	2,269,000 ,,
	5,998,000 bales.
Estimated village consumption	750,000 ,,
Total	6,748,000 bales.

If to the figure of 4,674,000 bales accounted for by press returns and loose cotton received in mills is added the estimated crop of 711,000 bales deducted as having no comparable press returns the total indicated crop for 1930-31 comes to 5,385,000 bales. This quantity is still much below the total of exports and mill consumption. Since we know that exported cotton is all in full-pressed bales we have to infer that a large part of this difference is due to the incompleteness of the loose cotton returns. At present we receive these only from the mills in the five major cotton growing provinces. Forty-seven mills situated in the Indian States, 12 in Bengal, 3 in Ajmer-Merwara and 1 in Burma amounting to 63 in all do not at present furnish these figures. It is reasonable to assume that mills in the *mofussil* take considerable quantities of loose cotton and in order to make our returns complete all mills in India should be asked to submit the returns.

At present the mills which supply these figures furnish them monthly, but there is no particular advantage in this. Annual statistics would be sufficient. If the Committee agrees, all mills in India will be asked to furnish a yearly statement of the quantity of loose cotton consumed by them.

Table showing the estimated cotton crop and the number of bales pressed in India during the season 1930-31.

(1)	Estimated crop. (Bales of 400 lbs. nett). (2)	Number of bales pressed. (Running bales). † (3)	Excess (+) or Deficit (—) of cotton pressed over estimated crop. (4)	Remarks.
BOMBAY—				†Figures taken from all-India Weekly Press Returns.
Western India States—				
Nawanagar	* 13,153	8,528	— 4,625	
Porbandar	* 12,712	12,156	— 556	
Dhrangadra	* 52,293	17,149	— 35,144	*Figures supplied by the Director of Agriculture, Bombay, in his letter No. P150, dated 24-10-31. Relate to April 1931 estimates.
Bhavnagar	* 112,138	33,731	— 78,407	
Gondal	* 7,993	5,986	— 2,007	
Wankaner	* 6,806	3,943	— 2,863	
Wadhwan	* 9,518	6,356	— 3,162	
Limbdi	* 3,900	4,785	+ 885	
Rajkot	* 1,407	2,030	+ 623	
Morvi	* 33,864	13,980	— 19,884	
Sardargadh	* 3,576	13,516	+ 9,940	
Junagadh	* 61,965	53,847	— 8,118	
Manavadar	* 8,371	21,895	+ 13,524	
Jasdan	* 2,580	3,871	+ 1,291	
Muli	* 8,791	2,628	— 6,163	
Sayla	* 3,432	1,818	— 1,614	
Lakhtar	* 7,864	3,301	— 4,563	
Agency Areas	* 62,138	4,252	— 57,886	
Western India States Agency Total ..	(*a*)436,396	213,772	—222,624	(*a*) Includes also other States in the Agency.
Mahikantha Agency				
Idar	* 2,826	4,200	+ 1,380	
Katosan	* 468	7,593	+ 7,125	
Total ..	3,288	11,793	+ 8,505	
Rewakantha Agency				
Rajpipla	* 43,395	31,811	— 11,584	
Chhota Udepur	* 20,230	8,613	— 11,617	(*b*) Includes also other States in the Mahikantha and Rewakantha Agencies and in the other Agencies.
Cambay	* 3,001	2,764	— 237	
Total ..	66,626	43,188	— 23,438	
Other Gujarat Sates Total	(*b*) *82,690	54,981	— 27,709	
Baroda State				
Baroda District	@ 67,298	65,215	— 2,083	@ Figures taken from the Baroda cotton forecast of February 1931. No change in April 1931.
Navsari „	@ 30,258	18,820	— 11,438	
Kadi „	@ 35,882	48,380	+ 12,498	
Amreli „	@ 9,216	2,570	— 6,646	
Total ..	@ 1,42654	134,985	— 7,669	

(1)		Estimated crop. (Bales of 400 lbs. nett.). (2)	Number of bales pressed (Running bales). ‡ (3)	Excess (+) or Deficit (—) of cotton pressed over estimated crop. (4)	Remarks.
BOMBAY—(Contd.)					‡ Figures taken from All-India Weekly Press Returns.
Total Indian States Gujerat	(c)	661,740	403,738	—258,002	
British India—Gujerat ..	@	175,943	374,544	+198,601	
Total—Gujerat ..		837,683	778,282	—59,401	(c) Total of "Western India States Agency," "Other Gujarat States" and "Baroda State."
Br. India—North Deccan ..	@	289,230	328,121	+38,891	
,, —East Deccan ..	@	68,624	60,595	—8,029	
(Akalkot & other Deccan States)	@	2,088	..	—2,088	
Total—East Deccan .	@	70,712	60,595	—10,117	@ Figures taken from the Bombay Provincial Forecast of April 1931.
S. M. C. States.					
Mudhol	*	6,314	1,030	— 5,284	
Jamkhandi	*	13,044	1,698	—11,346	
Miraj (Sr.)	*	1,334	1,276	— 58	
Sangli	*	11,752	4,248	— 7,504	
Kolhapur	*	6,671	2,252	— 4,419	
Savanur & other States ..	†	3,894	2,988	— 906	*Figures supplied by the Director of Agriculture, Bombay, in his letter No. P. 150, dated 24-10-31.
Total ..	†	43,009	13,492	—29,517	
British India—West Deccan	†	122,662	112,451	—10,211	
Total—West Deccan ..		165,671	125,943	—39,728	† Figures taken from the Bombay Provincialforecast of April 1931.
Br. India—Sind	†	83,831	140,515	+ 56,684	
Kharipur—Sind	†	1,244	..	— 1,244	
Total—Sind ..		85,075	140,515	+ 55,440	
Total—Indian States ..		708,081	417,230	—290,851	
,, Br. India-Bombay		740,290	1,016,226	+275,936	
,, Bombay		1,448,371	1,433,456	—14,915	
Loose cotton received in mills in the Presidency..		..	54,409	+ 54,409	
GRAND TOTAL ..		1,448,371	1,487,865	+ 39,494	
PUNJAB.					
Indian States.—					
Nabha	¶	16,400	25,809	+ 9,409	
Faridkot		..	9,114	+ 9,114	
Jind	¶	12,100	23,415	+ 11,315	
Bahawalpur	¶	43,600	12,154	— 31,446	
Patiala	¶	20,600	..	— 20,600	¶ Fgures taken from the Punjab Forecast of Ferbuary 1931.
Kapurthala	¶	7,000	..	— 7,000	
Total ..	¶	99,700	70,492	— 29,208	

(1)	Estimated crop. (Bales of 400 lbs. nett.). (2)	Number of bales pressed (Running bales). † (3)	Excess (+) or Deficit (—) of cotton pressed over estimated crop. (4)	Remarks.
PUNJAB—(Contd).				† Figures taken from All-India Weekly Press Returns.
Br. India—Ambala ..	¶ 91,200	146,773	+ 55,573	
,, Jullunder ..	¶ 33,200	17,644	— 15,556	
,, Lahore ..	¶ 124,000	128,900	+ 4,900	
,, Rawalpindi ..	¶ 56,000	60,463	+ 4,463	
,, Multan ..	¶ 325,200	398,450	+ 73,250	¶ Figures taken from the Punjab forecast of February 1931.
,, Ferozepore ..	¶ 36,700	65,323	+ 28,623	
Total	¶ 666,300	817,553	+151,253	
Total—Punjab ..	¶ 766,000	887,945	+122,045	
Loose cotton received in mills in the Punjab ..	..	4,307	+ 4,307	
GRAND TOTAL	766,000	892,252	+126,352	
N. W. F. Provinces ..	@ 3,000	513	— 2,487	@ Figures taken from the All-India forecast of April 1931.
Delhi	@ 1,000	..	— 1,000	
RAJPUTANA.				
Rajputana States				
Jaipur	+ 11,899	2,562	— 9,337	
Jodhpur	+ 6,323	9,032	+ 2,709	
Tonk	+ 4,206	10,778	+ 6,572	
Jhalawar	+ 4,074	10,516	+ 6,442	
Shahpura	+ 2,223	1,123	— 1,100	
Mewar	+ 25,140	42,231	+ 17,091	
Bikaner	+ 4,653	9,870	+ 5,217	
Bundi	+ 1,370	..	— 1,370	
Kotah	+ 5,631	..	— 5,631	
Kishangarh	+ 2,541	..	— 2,541	
Others	+ 4,950	..	— 4,950	+ Figures taken fom the All-India February 1931 forecast. No change in April.
Total ..	+ 73,010	86,112	+ 13,102	
Ajmer-Merwara	@ 11,000	32,219	+ 21,219	
Total-Rajputana ..	84,010	118,331	+ 34,321	
CENTRAL INDIA.				
Gwalior	@ 103,000	..	—103,000	‡ Figure supplied by the D. G. C. I. and S. in his letter No. 4254/P, dated 13-5-31.
Indore	‡ 112,480	138,069	+ 25,589	

(1)	Estimated crop. (Bales of 400 lbs. nett.). (2)	Number of bals pressed (Running bales). ‡ (3)	Excess (+) or Deficit (—) of cotton pressed over estimated crop. (4)	Remarks.
CENTRAL INDIA—(Contd.)				
Bhopal Agency				
Bhopal	† 7,255	10,051	+ 2,796	‡ Figures taken from All-India Weekly Press Returns.
Narsingarh	† 9,015	11,798	+ 2,783	
Rajgarh	† 8,739	..	— 8,739	
Others	† 1,312	..	— 1,312	
Total ..	† 26,321	21,849	— 4,472	
Bhaghelkhand Agency ..	† 970	..	— 970	† Figures supplied by the D. G. C. I. & S. in his letter No. 4254-P, dated 13-5-31.
Bundelkhand Agency				
Datia	† 3,343	838	— 2,505	
Others and Alipura ..	† 3,088	919	— 2,169	
Total ..	† 6,431	1,757	— 4,674	
Malwa Agency.				
Dewas S. B.	† 3,003	..	— 3,003	
Dewas J. B.	† 3,454	..	— 3,454	
Jaora	† 5,846	18,383	+ 12,537	
Rutlam	† 4,585	15,291	+ 10,706	
Others	† 3,193	..	— 3,193	
Total ..	† 20,081	33,674	+ 13,593	
Southern States Agency				
Dhar	† 20,149	30,248	+ 10,099	
Jhabua	† 1,456	(a) 1,916	+ 460	(a) Figure reported by the State.
Barwani	† 16,036	18,119	+ 2,083	
Alirajpur	† 400	..	— 400	
Others	† 276	..	— 276	
Total ..	† 38,317	50,283	+113,966	
Total—Central India ..	307,600	245,632	— 61,968	
United Provinces.				
Upper Doab	@ 145,181	118,447	— 26,734	
Middle Doab	@ 117,708	71,678	— 46,030	@ Figures taken from the U. P. February 1931 forecast. No change in April.
Lower Doab & Bundelkhand.	@ 21,473	17,297	— 4,176	
Rohilkhand including Rampur State	@ { 28,321 / 5,015	9,976	— 23,360	
Rest of the Province ..	@ 3,678	..	— 3,678	
Total	@ 321,376	217,398	—103,978	
Lose cotton received in mills	..	18,496	+ 18,496	
GRAND TOTAL ..	321,376	235,894	— 85,482	

(1)		Estimated crop (Bales of 400 lbs. nett.). (2)		Number of bales pressed (Running bales.) † (3)		Excess (+) or Deficit (—) of cotton pressed over estimated crop. (4)	Remarks.
Bihar and Orissa	0	14,000		..	—	14,000	† Figures taken from the All-India Weekly Press Returns.
Bengal	0	19,000		35,547	+	16,547	
Assam	0	15,000		..	—	15,000	
Central Provinces and Berar.							0 Figures taken from the All-India cotton forecast of April 1931.
Jubbulpore	*a*	1,300		..	—	1,300	
Nerbudda	*a*	19,000		23,200	+	4,200	
Nimar	*a*	93,900		101,985	+	8,085	
Nagpur	*a*	215,300		326,060	+	110,760	
Satpura	*a*	34,900		13,566	—	21,334	
Chattisgarh	*a*	800		..	—	800	
Central Provinces Total ..	*a*	365,200		464,811	+	99,611	*a* Figures taken from the Central Provinces forecast of February 1931 which are in bales of 400 lbs. gross (392 lbs. nett).
Berar	*a*	718,500		804,685	+	86,185	
Central Provinces & Berar —Total	*aa*	1,083,700		1,269,496	+	185,796	*aa* In the All-India forecast only the equivalent of 1,062,000 bales of 400 lbs. is taken into account. No change in April.
Loose cotton received in mills		..		15,771	+	15,771	
GRAND TOTAL ..		1,083,700		1,285,267	+	201,567	
Hyderabad State	0	382,000		372,558	—	9,442	
Mysore State	0	10,000		..	—	10,000	*x* Figures taken from the Madras forecast of April 1931.
Madras.							
Tinnevellies	*x*	132,600	*	58,891	—	73,709	* Cotton pressed from 1st February 1931 to 6th November 1931.
Salems	*x*	32,700	*	8,931	—	23,769	
Cambodias	*x*	110,900	*	54,286	—	56,614	
Northerns & Westerns ..	*x*	109,900	*	91,227	—	18,673	
Cocanadas & others ..	*x*	30,700	*	24,344	—	6,356	
Total ..	*x*	416,800	*	237,679	—	179,121	@ Unpressed cotton received in mills from 1st Feb. 1931 to 6th November 1931.
Loose cotton received in mills		..	@	57,458	+	57,458	
GRAND TOTAL ..		416,800		295,137	—	121,663	
Burma	*d*	86,800		39,022	—	47,778	*d* Figure taken from the Burma forecast of February 1931. No change in April.

Supplementary Note (1).

The Director of Agriculture, Bombay Presidency, has submitted an exhaustive note which is attached, explaining the discrepancies between the forecasted crop and the press returns in the presidency, a perusal of which will convince the most sceptical that every effort is being made by provincial authorities to improve the accuracy of their estimates. Mr. Main deserves great credit for the completeness of his examination.

Mr. Main makes two requests (1) that the Central Cotton Committee should ask the Director General of Commercial Intelligence and Statistics to publish separately trade statistics for loose cotton, and (2) that the Central Cotton Committee should make efforts to obtain complete press figures for Western India States.

As regards the first request, it is not necessary for the Committee to pass a resolution on the subject. If the suggestion is acceptable I shall get into touch with the Director General of Commercial Intelligence and Statistics and obtain his views on the subject. Regarding request No. (2), as far as we know Cutch and Radhanpur are the only States which have *pucca* pressing factories and did not submit press returns in 1930-31. Radhanpur has introduced a Cotton Ginning and Pressing Factories Act recently and press returns will be available during this season. Cutch has been addressed repeatedly but no reply can be obtained. Every effort will continue to be made by this office to get complete press figures.

Note comparing the Final Cotton Forecast Outturn with the quantity actually pressed in the cotton presses of the Bombay Presidency during the season 1930-31.

In this note the "Raw Cotton Trade Statistics" showing the rail-borne trade in raw cotton published by the Director of Statistics, Calcutta, have not been taken into account as these statistics do not differentiate between cotton already pressed and loose cotton. As it is the latter which only can affect our press figures, we want statistics separately for the same but as these are not available in the statistics published by the Director of Statistics, it has not been found possible to make use of these in the present note. As it is likely that a good deal of loose cotton comes in for pressing in the Bombay Presidency from both the adjoining British Territory and Indian States, e.g., Central Provinces and Berar and the Nizam's Dominions, it will be very desirable to have separate statistics for the loose cotton so imported for pressing and perhaps the Indian Central Cotton Committee may be requested to approach the Director of Statistics with a view to publish these separately in future.

Now with regard to the accuracy of the Final Cotton Forecast as compared with the cotton press statistics the following is briefly the position in the different divisions of the Bombay Presidency :—

I. GUJARAT.

Districts arranged according to Cotton Press Blocks.	Final Cotton Forecast, April 1931.				Season and Crop Report, July 1931.			Bales of cotton actually pressed upto 31st August 1931.	Bales pressed over (+) or below (−) the outturn in	
	Area.	Anna Valuation.	Standard yield in lbs. per acre.	Outturn.	Area.	Anna Valuation.	Outturn.		Final Cotton Forecast (Col. 5).	Season and Crop Report (Col. 8.)
1	2	3	4	5	6	7	8	9	10	11
	Acres.	Anna.	Lbs.	Bales.	Acres.	Anna.	Bales.	Bales.	Bales.	Bales.
Ahmedabad	358,713	6.0	125	56,498	377,299	6.5	63,392	101,303	+ 44,805	+ 37,911
Kaira	63,804	7.3	115	12,156	68,019	8.0	13,093	24,289	+ 12,133	+ 11,196
Panch Mahals	31,568	8.9	120	7,025	29,631	7.6	5,628	9,643	+ 2,618	+ 4,015
Broach	273,423	8.4	130	62,205	284,421	9.0	68,971	148,393	+ 86,188	+ 79,422
Surat	171,045	8.9	120	38,059	167,935	6.0	25,189	83,425	+ 45,366	+ 58,236
Total—Gujarat ..	898,553	7.5		175,943	927,305	7.3	176,273	367,053	+191,110	+190,780

The forecasted outturn of 175,943 bales (col. 5) is short by 191,110 bales (col. 10) of cotton actually pressed, viz.: 367,053 bales (col. 9). The figures of area reported for the Final Cotton Forecast in April 1931 are however nearly confirmed by the subsequent data received in July 1931 in connection with the Season and Crop Report at which time actual and not estimated areas are communicated. Thus the forecast area 899,000 acres (col. 2) is short of the Season and Crop Report area of 927,000 acres (col. 6) by only 28,000 acres or less than three per cent. and considering that the forecast areas are estimates in many cases, we must admit that in this case the area figures reported for the forecast are very fairly accurate.

The anna valuation worked out for the Gujarat Division as a whole from that reported at the time of the Final Forecast from the various districts in the division is 7.5 (col. 3) and this compares very favourably with the anna valuation worked out similarly from the figures reported for the Season and Crop Report, viz. 7.3 (col. 7).

As the area figures are fairly accurate as remarked above and as the forecasted outturn is considerably below the press figure it would appear that the anna valuations reported both for the Final Cotton Forecast and the Season and Crop Report were unduly high. This is not, however, the case. For, we have to remember that the British Districts of Gujarat are very closely interlaced with Indian States and hence to have a true picture of the position it is necessary to consider the figures in the adjoining States side by side with those of the British Districts. When this is done we have the following position :—

	Final Cotton Forecast outturn (April 1931)	Quantity pressed since 1st September 1930 to 31st August 1931.
	Bales.	Bales.
A. British Districts of Gujarat ..	175,943	367,053
B. Indian States adjoining the British Territory of Gujarat		
(*a*) Baroda	140,000	134,985
(*b*) Western India States Agency	436,396 (Revised).	213,772* 15,424@
(*c*) Other Gujarat States ..	82,690 (Revised).	54,981
Total Gujarat & Kathiawar ..	835,029	786,215

The Final Forecast Outturn is thus higher by some 49,000 bales than the press figure or by some six per cent. only which is not much and even this small difference may be due either (1) to a slightly higher anna valuation reported from the Western India States Agency and the other Gujarat States but more probably due to (2) incomplete press statistics from these States.

The line of improvement in this connection would thus appear to be to try to obtain more complete press returns from the Western India States Agency. A definite improvement has already been made in this respect since the preceding season (1929-30) as will be seen from the fact that whereas during this season (1929-30) the press statistics published in the Indian Trade Journal for this Agency amounted to a total of 127,532 bales only, they have risen to 213,772 bales during the season under review presumably as a result of the efforts made by the Indian Central Cotton Committee in this respect at this Department's request made to it last year. But from the press statistics for 1930-31 it appears that there is still room for further improvement in this connection and perhaps the Indian Central Cotton Committee may be requested to consider what further action it can take in the matter.

* Published in the *Indian Trade Journal*.

@ Obtained in addition by reference to the State Authorities.

II. NORTH DECCAN.

Districts arranged according to Cotton Press Blocks.	Final Cotton Forecast, April 1931.				Season and Crop Report (July 1931).			Bales of Cotton actually pressed upto 31st August 1931.	Bales pressed over (+) or below (−) the outturn in	
	Area.	Anna Valuation.	Standard yield in lbs. per acre.	Outturn.	Area.	Anna Valuation.	Outturn.		Final Cotton Forecast (Col. 5).	Season and Crop Report (Col. 8).
1	2	3	4	5	6	7	8	9	10	11
	Acres.	Anna.	Lbs.	Bales.	Acres.	Anna.	Bales.	Bales.	Bales.	Bales.
West Khandesh ..	442,676	10.0	110	101,815	443,629	9.0	90,944	133,577	+ 31,762	+ 42,633
East Khandesh ..	668,428	10.8	110	165,437	668,076	10.7	163,680	163,582	− 1,855	− 98
Nasik	98,999	7.3	100	21,978	99,294	9.0	18,618	24,400	+ 2,422	+ 5,782
Total—North Deccan ..	1,210,103	10.2	..	289,230	1,210,999	9.1	273,242	321,559	+ 32,329	+ 48,317

The forecasted outturn of 289,230 bales (col. 5) is short of the quantity actually pressed, viz., 321,559 bales (col. 9) by some 32,329 bales (col. 10). So far as the area is concerned, the figures are as accurate as can be, as will be seen from the fact that the area reported for the final cotton forecast in April 1931 of 1,210,000 acres (col. 2) is *exactly* confirmed by the area reported subsequently for the season and crop report which is also the same—1,210,000 acres (col. 6). The area factor is thus not responsible for the difference. It would hence appear that the anna valuation reported for the final cotton forecast, which for the block as a whole works out to 10.2 from the figures reported for the various districts in the block, was an underestimate. But rather than assuming the anna valuation as an underestimate it seems more than probable that the difference is due to the good deal of cotton which comes into the block for pressing from the adjoining territory of Central India and the Nizam's Dominions, and which has raised the press figure.

As stated in the beginning of this note, the rail-borne trade figures do not give separately the amount of loose cotton that comes in for pressing and as such it is not possible to make an estimate of this amount, although it must be considerable.

If we make allowance for this factor, then the forecast in this Block would appear to be very nearly accurate.

III. EAST DECCAN.

Districts arranged according to Cotton Press Blocks.	Final Cotton Forecast, April 1931.				Season and Crop Report (July 1931).			Bales of cotton actually pressed upto 31st August 1931.	Bales pressed over (+) or below (−) the outturn in	
	Area.	Anna Valuation.	Standard yield in lbs. per acre.	Outturn.	Area.	Anna Valuation.	Outturn.		Final Cotton Forecast (Col. 5).	ason and Crop Report (Col. 8).
1	2	3	4	5	6	7	8	9	10	11
	Acres.	Anna.	Lbs.	Bales.	Acres.	Anna.	Bales.	Bales	Bales.	Bales.
Ahmednagar	106,797	6.6	90	13,350	116,145	7.0	15,098	16,426	+ 3,076	+ 1,328
Sholapur	35,369	6.4	90	4,244	35,569	5.8	3,824	14,746	+10,502	+10,922
Bijapur	457,213	6.0	90	51,030	463,611	5.0	44,043	28,211	−22,819	−15,832
Total—East Deccan ..	599,379	6.1		68,624	615,325	5.4	62,965	59,383	−9,241	− 3,582

The forecasted outturn of 68,624 bales (col. 5) is higher than the amount actually pressed, viz., 59,383 bales (col. 9) by 9,241 bales (col. 10). The area reported for the final cotton forecast in April 1931, viz., 599,379 acres (col. 2) is very nearly the same as that reported subsequently in July for the Season and Crop Report, viz., 615,325 acres. The difference between the two being only of some 16,000 acres which works out to between two and three per cent. only need not be considered. Hence, the difference between the forecasted outturn and the press figure may be due to the anna valuation factor and this appears to be actually the case. Thus, while in the districts of Ahmednagar and Sholapur the outturn worked out from the area and anna valuation reported for the final cotton forecast is very nearly the same, viz., 18,000 bales (13,350 for Ahmednagar +4,244 for Sholapur in col. 5), as that worked out from the area and anna valuation reported subsequently for the Season and Crop Report, viz., 19,000 bales (15,098 for Ahmednagar and 3,824 for Sholapur in col. 8). The case is different in Bijapur District. Here, the forecasted outturn col. 5) is 51,030 bales against the outturn arrived at, at the time of the Season and Crop Report, viz., 44,043 bales (col. 8) or an excess of 7,000 bales which very nearly explains the difference of 9,000 bales between the forecasted outturn and the amount pressed in the block. This excess of some 7,000 bales in outturn in the case of the Bijapur District is due to an anna valuation of 6 being reported for the forecast instead of the 5 annas reported for the Season and Crop Report.

As it is difficult to make any distinction between a 5 anna crop and a 6 anna crop, the Revenue Officers cannot be in fairness blamed for this difference. Perhaps, however, the attention of the Commissioner, S. D., may be invited to this point.

IV. WEST DECCAN.

Districts arranged according to Cotton Press Blocks.	Final Cotton Forecast, April 1931.				Season and Crop Report (July 1931).			Bales of Cotton actually pressed upto 31st August 1931.	Bales pressed over (+) or below (—) the outturn in	
	Area.	Anna Valuation.	Standard yield in lbs. per acre.	Outturn.	Area.	Anna Valuation.	Outturn.		Final Cotton Forecast (Col. 5).	Season and Crop Report (Col. 8).
1	2	3	4	5	6	7	8	9	10	11
	Acres.	Anna.	Lbs.	Bales.	Acres.	Anna.	Bales.	Bales.	Bales.	Bales.
Poona	6,759	7.7	90	979	9,295	6.5	1,131	6,587	+ 5,608	+ 5,456
Satara	13,957	9.7	90	2,548	15,607	9.6	2,347	....	— 2,548	— 2,347
Belgaum	189,243	6.6	100	26,020	202,207	7.0	27,720	22,757	— 3,263	— 4,963
Dharwar	631,290	5.9	120	93,115	569,654	5.6	84,356	80,863	— 12,252	— 3,493
Total—West Deccan and S. M. C.	841,249	6.1	..	122,662	796,763	6.0	115,554	110,203	— 12,459	— 3,004

The forecasted outturn of 122,662 bales (col. 5) is higher than the amount actually pressed, *viz.*, 110,203 bales (col. 9) by 12,459 bales (col. 10) and curiously enough very nearly the *whole* of this difference is traceable to the Dharwar district. Thus, out of the four districts of Poona, Satara, Belgaum and Dharwar included in this Block, the forecasted outturn in the first three districts, viz., Poona, Satara and Belgaum, is almost exactly equal to the amount pressed in these districts, as shown below :—

District.	Final Cotton Forecast outturn (col. 5)	Quantity actually pressed. (col. 9)
	Bales.	Bales.
Poona	979	6,587
Satara	2,548	....
Belgaum	26,020	22,757
Total ..	29,547	29,344

On the other hand, the forecasted outturn of 93,115 bales (col. 5) in the Dharwar district is higher than the amount actually pressed, viz., 80,863 bales (col. 9) in the district by 12,252 bales (col. 10) and all this big difference is wholly due to an area of 62,000 acres being reported *more* for the Final Cotton Forecast (631,290 acres in col. 2.) than that subsequently reported for the Season and Crop Report, viz., 569,654 acres in (col. 6). The anna vlauation reported for the Final Cotton Forecast was also slightly higher, viz., 5.9 in (col. 3) than that subsequently reported for the Season and Crop Report, viz., 5.6 (col. 7). In other words, if the area and anna valuation reported for the Season and Crop Report had been reported for the Final Cotton Forecast, the forecasted outturn would have been 84,356 bales (col. 8) instead of 93,115 bales (col. 5) forecasted in the Dharwar District. Thus out of a total difference of some 12,000 bales (col. 10) beween the forecast estimate (122,662 bales in col. 5) and the press figure (110,203 bales in col. 9) for the West Deccan Block, a difference of some 9,000 bales is traceable to the Dharwar District alone. Apart from this there is a good deal of import of loose cotton for pressing into the Gadag market in this block and if this is taken into account, it would appear that the forecast estimate for the block was higher than the press figure by more than 12,000 bales probably due to a higher anna valuation being reported both for the forecast and the Season and Crop Report in the case of this district. The attention of the Commissioner, S. D. may be invited to this with a request to ask the Collector, Dharwar, to arrange to have more accurate area and anna valuation figures reported to this Department for the cotton forecasts, in future.

V. SIND.

Districts arranged according to Cotton Press Blocks.	Final Cotton Forecast, April 1931.				Season and Crop Report (July 1931.)			Bales of cotton actually pressed upto 31st August 1931.	Bales pressed over (+) or below (−) the outturn in	
	Area.	Anna Valuation.	Standard yield in lbs. per acre.	Outturn.	Area.	Anna Valuation.	Outturn.		Final Cotton Forecast (Col. 5).	Season and Crop Report (Col. 8).
1	2	3	4	5	6	7	8	9	10	11
	Acres.	Anna.	Lbs.	Bales.	Acres.	Anna.	Bales.	Bales.	Bales.	Bales.
Hyderabad	54,085	9.0	198	20,145	56,073	8.0	18,502	33,418	+ 33,273	+ 14,916
Thar Parkar..	137,527	7.0	160	31,975	139,696	7.0	32,803	41,885	+ 9,910	+ 9,082
Nawabshah	82,946	8.0	200	31,106	83,349	9.0	32,155	55,251	+ 24,145	+ 23,096
Other Sind Districts ..	2,000	8.0	181	605	1,038	8 0	314	7,151	+ 6,546	+ 6,837
Total—Sind	276,558	7.7	Nil	83,831	281,156	7.7	83,774	137,705	+ 53,874	+ 53,931

The forecasted outturn of 83,831 bales (col. 5) is short of the amount actually pressed, viz., 137,705 bales (col. 9) by as much as 53,874 bales (col. 10). The area reported for the final cotton forecast, viz., 276,558 bales acres in col. 2 in April 1931 has been nearly confirmed at the time of the Season and Crop Report when an area of 281,156 acres was reported. The difference between the Final Cotton Forecast area and the Season and Crop Report area is thus only of some 5,000 acres which works out to only 2 per cento and so need not be considered. Hence, the discrepancy would appear to be due to the anna valuation factor. Now, the anna valuation reported for the Final Forecast which works out to 7.7 for the province from the figures reported for the various districts is the *same* as that arrived at from the anna valuation reported for the various districts at the time of the Season and Crop Report. This means that the Collectors in Sind considerably underestimated the crop both in April 1931, i.e., at the time of the Final Cotton Forecast and in July again at the time of the Season and Crop Report. Judging from the press figures, the anna valuation should have been 12 instead of 7.7 and if this (12) had been reported the outturn would have worked out to some 131,000 bales and this figure would have tallied with the press figure of 138,000 bales (col. 9) after making allowance for the cotton that comes in for pressing in the Province of Sind from the adjoining State of Bahawalpur.

Perhaps, the Commissioner in Sind may be requested to consider this point and if approved to issue the necessary instructions to the Collectors in the province so that an unduly low anna valuation may not be reported in future.

On the whole, the position in the different blocks of the Presidency proper appears to be generally satisfactory during the season under review.

(1) The excess of some 49,000 bales or 6 per cent. in the forecast outturn in Gujarat and Kathiawar over the press figure is probably due to incomplete press figures from the Western India States Agency.

(2) The underestimate of some 32,00 bales or by 11 per cent. in the forecasted outturn as compared with the press figure in the North Deccan is probably due to the imports of loose cotton for pressing into the block from the Central India Agency and the Nizam's Territory.

(3) The excess in the forecast estimate over the press figure of some 9,000 bales in the East Deccan seems to be wholly due to a higher anna valuation (6) being reported for the Final Cotton Forecast in the Bijapur district, than was subsequently reported for the Season and Crop Report, viz., 5.

(4) In the West Deccan, the excess in the forecasted outturn over the press figure of some 12,000 bales is chiefly due to an excess of 60,000 acres being reported for the forecast from the Dharwar district over the area subsequently reported for the Season and Crop Report.

In Sind, the forecast estimate is only about two-thirds of the press figure and this under-estimate is probably due to a low anna valuation being reported for the forecast. The anna valuation should have been 12 in place of an average of 7.7 annas for the province.

[*SUPPLEMENTARY NOTE (2)*].

Raw Cotton Trade Statistics.

This note is supplementary to the one comparing cotton press returns with forecasts already issued. It could not be incorporated in the previous note as complete figures or raw cotton trade statistics were not then available.

Crop indicated by raw cotton trade statistics.

This is the first time the Indian Central Cotton Committee has had an opportunity of considering these statistics, and their limitations and possbilities may, at the outset, be briefly stated. These statistics, hitherto published monthly as supplements to the Indian Trade Journal and, in future, as separate publications, show the inter-provincial trade between each of the 62 internal trade blocks into which India, excluding Burma, has been divided for this purpose. These statistics do not distinguish between foreign and Indian cottons or between pressed and unpressed cotton, and thus they do not supplement cotton press returns in the same way as the loose cotton returns do. On

the other hand, they afford an independent estimate of the cotton production of each trade block when taken along with the mill-consumption statistics. In so doing local authorities should, however, take into consideration the effect (1) of road-transport of lint or *kapas* into or out of the block, (2) of rail-transport of *kapas* into or out of the block for purposes of ginning, (3) of variation in local stocks of raw cotton at the end of the season and (4) of cotton used for hand-spinning, quilts, mattresses, etc. and for other domestic purposes.

Crop indicated by press returns.

When the approximate production for each trade block has thus been ascertained it may be compared with the crop indicated by cotton press returns and loose cotton received in mills. Here again due allowance should be made (1) for transport by rail and road of *kapas* and unpressed cotton, and (2) for cotton used for domestic purposes. It should also be particularly noted in this connection that the trade blocks adopted for the purposes of Raw Cotton Trade Statistics are not always the same as those adopted for the purposes of cotton press returns. Allowances however can be made and the two sets of figures made comparable by adding to or subtracting from the total the output of a few pressing factories, complete details for which are always available with the authorities responsible for compiling press returns. Similarly figures for loose cotton received in mills can be had separately wherever necessary.

Estimate of Production.

A careful analysis of the two sets of figures, and an examination of the possible causes for the discrepancies between the two would, it is hoped, lead to the discovery of the factors affecting not only the completeness and reliability of the actual crop of the block, but also of the forecasts. It will thus be possible to ascertain the production of the block more accurately than it has ever been possible in the past.

Improvement of the standard yield factor in the formula "Production=Area × Standard Yield × Condition factor.

When the production of anyone block has been accurately determined as explained above, the yield per acre can be ascertained by dividing the total yield by the total area under cultivation. These figures of actual yield per acre for the area covered by the block would, over a series of years, according to the late Mr. Stuart (*vide* Agricutural Journal of India, April 1919, pp. 275-280—article entitled "A method of correcting the inherent pessimism of the farmer") be much more reliable than the standard outturns obtained at present from random crop-cutting experiments. This subject was discussed at the eleventh meeting of the Board of Agriculture held at Pusa in December 1916 and attention is invited to the Proceedings of the Meeting for a fuller discussion of the subject. Any improvement in this factor cannot but lead ultimately to an improvement in the accuracy of the forecasts.

Extra Factory or Village Consumption.

The quantity of cotton used for hand-spinning, bedding, quilts etc., and for other domestic purposes usually known as "extra factory or village consumption" of cotton is still a much disputed point. At the thirteenth meeting of the Board of Agriculture held at Bangalore in 1924 Mr. Burt submitted a paper in which he attempted to make an estimate of the extra-factory consumption in two blocks in the United Provinces, where little cotton is grown, viz., the Benares and Gorakhpur blocks by calculating the net imports of cotton into those blocks and thus working out the *per capita* consumption of cotton. Now that the rail-borne trade statistics have been revived it is hoped local authorities will investigate the possibilities of this method of ascertaining extra-factory consumption of cotton.

Season, 1930-31.

Production of each internal trade block.

Turning now to the statistics for 1930-31, a table showing in maunds the imports into, exports from, and net imports into or exports from each trade block is attached. In the last three columns an attempt is made to arrive at the production of each block by adding together net exports and mill consumption. As the object is to ascertain the production of each block figures have not been entered where mill consumption plus net exports or imports is not a positive quantity. This statement is only meant as the framework for the Provincial authorities to work upon.

(The figures for mill consumption shown in the statement against the Western Bengal, Dacca, Benares, South Oudh, Jubbulpore, Nimar, and Hissar trade blocks cannot be divulged, as there is only one mill in each of these blocks, and the publication of these figures would therefore be an offence under Section 11 (1) of the Indian Cotton Cess Act).

The results are, in general, in agreement with the results obtained by the comparison of cotton press returns with forecasts, the indicated crop in the Punjab, Sind, the Central Provinces, the Central India States, Rajputana States and Mysore being more than the forecasted crop. No conclusions can be drawn from the Bombay figures as it is known that a considerable quantity of foreign cotton was sent to other blocks in the Presidency from the port of Bombay. There is also some movement of cotton by sea in country boats.

In the case of Madras the figures of production indicated in the statement are not comparable with the forecasted crop, as the two seasons are different.

Production of each major trade block.

A second table showing the position with regard to the major trade blocks, *viz.*, the Provinces and States, is also attached. From the point of view of more accurate determination of the production of each major block, this statement is not very useful, as the total net export from a major block is not necessarily the sum of the net exports from each internal trade block in the major block, since the inter-block trade for local consumption cancel each other. This statement shows largely at a glance what the position is with regard to the whole of India.

Exports by sea and variation in stocks or carryover have also been taken into consideration, as far as known. Column 9 is the ascertained production by this method. In columns 10 and 11 are given for comparison the crop indicated by the press returns and loose cotton received in mills, and the forecasted crop.

The maritime Provinces of Bombay, Bengal and Sind show production (column 9) much higher than the crop pressed (column 10). Two causes might be cited for this phenomenon, *viz.*, reduction in carryover and movement of foreign cotton. In the case of Bombay, however, the discrepancy is too large to be explained away in this way. This requires further investigation.

Some of the excesses noticed in column 9 over column 10 may also be due to the incompleteness of loose cotton returns.

STATEMENT NO. I.

Raw Cotton Trade Statistics—Season 1930-31.

Internal Trade Blocks.	In maunds.			In bales of 400 lbs. net.		
	Imports.	Exports.	Net exports(+) or net imports(−)	Net exports.	Consumption.	Production.
Assam.						
Upper Assam ..	1,561	4,513	+ 2,952	607	..	607
Lower Assam ..	2,942	27,133	+ 24,191	4,977	..	4,977
Surma Valley ..	643	35,266	+ 34,622	7,122	..	7,122
Total ..	5,146	66,912	+ 61,766	12,706	..	12,706

Internal Trade Blocks.	In maunds.			In bales of 400 lbs. net.		
	Imports.	Exports	Net exports(+) or net imports(−).	Net exports.	Consumption.	Production.
Bengal.						
Calcutta	452,246	60,665	— 391,581	— 80,554	39,521	..
Western Bengal..	16,176	2,800	— 13,376	— 2,752	9,032	6,280
Eastern „ ..	32,591	9,095	— 23,496	— 4,834	43,440	38,606
Northern „ ..	2,173	26,900	+ 24,727	5,087	..	5,087
Dacca	56,983	43,595	— 13,388	— 2,754	3,540	786
Chittagong Port..	17,358	71,430	+ 54,072	11,123	..	11,123
Total ..	577,527	214,485	— 363,042	..	95,533	61,882
Bihar & Orissa.						
Patna City ..	4,312	2,614	— 1,698	..	..	..
Bihar (excluding Patna City) ..	34,423	26,407	— 8,016	..	..	..
Chota Nagpur ..	2,788	674	— 2,114	..	..	..
Orissa	1,454	744	— 710	..	..	..
Total ..	42,977	30,439	— 12,538	..	..	..
United Provinces.						
Upper Doab ..	27,617	372,679	+ 345,062	70,984	25,523	96,507
Middle „ ..	40,896	381,914	+ 341,018	70,152	31,217	101,369
Cawnpore City ..	900,895	62,338	— 838,557	— 172,503	156,946	..
Lower Doab ..	4,368	2,192	— 2,176	..	..	..
Bundelkhand ..	3,460	19,534	+ 16,074	3,307	..	3,307
Benares	26,774	1,115	— 25,659	— 5,278	3,018	..
Gorakhpur ..	12,994	1,589	— 11,405	..	..	..
Rohilkhand ..	61,627	47,923	— 13,704	— 2,819	14,422	11,603
North Oudh ..	9,022	2,000	— 7,022	..	..	..
South „ ..	32,910	19,362	— 13,548	— 2,787	4,497	1,710
Total ..	1,120,563	910,646	— 209,917	..	235,623	214,496
Punjab.						
Delhi Province ..	239,565	9,712	— 229,853	— 47,284	61,997	14,713
Rest of Cis-Sutlej Territory ..	76,314	1,848,626	+1,772,312	364,590	892	365,482
Territory between Sutlej and Jhelum	52,560	2,987,523	+2,934,963	603,764	11,258	615,022
Territory between Jhelum and N. W. F. P. ..	68,227	13,631	— 54,596	..	..	..
North-West Frontier Provinces..	5,661	7,860	+ 2,199	452	..	452
Total ..	442,327	4,867,352	+4,425,025	..	74,147	995,669

Internal Trade Blocks.	In maunds.			In bales of 400 lbs. net.		
	Imports.	Exports.	Net exports(+) or net imports(—)	Net exports.	Consumption.	Production.
Sind and British Baluchistan.						
Sind and British Baluchistan excluding Karachi.	5,156	702,884	+ 697,728	143,533	..	143,533
Karachi	4,659,743	2,179	—4,657,564	..	..	..
Total ..	4,664,899	705,063	—3,959,836	..	..	143,533
Central Provinces and Berar.						
Jubbulpore ..	11,212	4,130	— 7,082	— 1,457	3,481	2,024
Nerbudda ..	138	140,419	+ 140,281	28,858	..	28,858
Nimar	16,092	723,299	+ 707,207	145,483	6,708	152,191
Nagpur	168,838	1,633,792	+1,464,954	301,362	84,232	385,594
Chhatisgarh ..	63,337	2	— 63,335	— 13,029	12,688	..
Berar	38,290	3,195,587	+3,157,297	649,501	24,071	673,572
Satpura	341	199,576	+ 199,235	40,985	..	40,985
Total ..	298,248	5,896,805	+5,598,557	..	131,180	1,283,224
Bombay Presidency.						
Bombay Port ..	11,798,360	1,034,430	-10,763,930	—2,214,294	664,546	..
Gujerat and Kathiawar ..	1,076,679	1,518,503	+ 441,824	90,890	413,125	504,015
Konkan	28,235	997	— 27,238	..	..	..
North Deccan ..	72,262	1,574,036	+1,501,774	308,936	37,288	346,224
East Deccan ..	377,295	273,980	— 103,315	— 21,253	95,655	74,402
West Deccan ..	13,905	5,799	— 8,106	..	..	..
S. M. Country ..	169,618	292,701	+ 123,083	25,320	54,473	79,793
Goa	46,320	..	— 46,320	..	..	..
Total ..	13,582,674	4,700,446	—8,882,228	..	1,265,087	1,004,434
Madras Presidency.						
Madras Port ..	642,377	24,116	— 618,261	— 127,185	53,701	..
French Ports ..	28,515	387	— 28,128	— 5,786	18,350	12,564
Other Sub-Ports..	154,128	118,982	— 35,146	..	..	..
Circars	1,821	2,987	+ 1,166	240	..	240
Deltas	48,149	142,066	+ 93,917	19,320	..	19,320
Deccan	1,470	417,828	+ 416,358	85,651	..	85,651
North Carnatic ..	852	27,623	+ 26,771	5,507	..	5,507
South „ ..	55	8,889	+ 8,834	1,877	..	1,877
Central Districts .	92,082	205,480	+ 113,398	23,327	46,071	69,398
Southern „ ..	148,730	155,929	+ 7,199	1,481	114,067	115,548
West Coast ..	28,652	3,339	— 25,313	— 5,207	9,306	4,099
The Hills.. ..	..	..	..	..	..	..
Total ..	1,146,831	1,107,626	—39,205	..	241,495	314,204

Internal Trade Blocks.	In maunds.			In bales of 400 lbs. net.		
	Imports.	Export.	Net exports(+) or net imports(−)	Net exports.	Consumption.	Production.
Rajputana ..	44,705	598,349	553,644	138,892	25,201	139,093
Central India ..	232,066	1,363,876	1,131,810	282,830	136,550	369,400
Nizam's Territory ..	338	1,762,972	1,762,634	362,599	23,074	385,673
Mysore	134,976	70,151	− 64,825	− 13,335	43,326	29,991
Kashmir	1,847	2	− 1,845	..	..	..
					Total ..	4,954,305

N.B.—The figures for mill consumption used in this statement are revised figures specially compiled for the purposes of this statement on the basis of the latest information available, and will not therefore agree with the figures published previously.

STATEMENT No. II.

Raw Cotton Trade Statistics for 1930-31.

(In bales of 400 lbs. net.)

Trade Blocks.	Inter-Provincial Trade. (In maunds).			Production. (In bales of 400 lbs. net).					Total No. of bales pressed (in running bales) & loose cotton received in mills.	Crop forecasted in the All-India Cotton Forecast of April 1931.
	Imports.	Exports.	Net exports (+) Net imports (—)	Net exports (+) Net imports (—) by rail and river.	Mill consumption.	Exports by sea.	Variation in stocks.	Total.		
1	2	3	4	5	6 (e)	7	8 (d)	9	10	11
*Assam	3,186	64,952	+ 61,766	+ 12,706	..	..	..	12,706	....	15,000
*Bengal	383,817	20,775	— 363,042	— 74,683	95,533	32,105	..	52,955	35,547	19,000
*Bihar & Orissa ..	39,826	27,288	— 12,538	— 2,579	..	..	..	— 2,579	....	14,000
*United Provinces ..	823,265	613,348	— 209,917	— 43,183	235,623	..	..	192,440	235,894	321,000
Punjab (a)	178,626	4,603,651	+ 4,425,025	+ 910,291	74,147	..	..	984,438	892,755	772,000
*Sind & British Baluchistan	3,964,349	4,513	— 3,959,836	— 814,595	..	999,158	..	184,563	140,515	85,000
*Central Provinces & Berar	187,467	5,786,024	+ 5,598,557	+ 1,151,703	131,180	..	..	1,282,883	1,285,267	1,062,000
*Bombay Presidency (b).	9,181,843	299,615	— 8,882,228	— 1,827,201	1,265,087	2,508,055	— 136,217	1,809,724	1,347,350	1,244,000

*Madras Presidency ..	267,991	228,786	— 39,205	— 8,065	241,495	105,437	..	338,867	342,494	417,000
Rajputana (c) ..	44,705	598,349	+ 553,644	+ 113,892	25,201	..	..	139,093	118,331	84,000
Central India ..	232,066	1,363,876	+ 1,131,810	+ 232,830	136,570	..	..	369,400	245,632	308,000
Nizam's Territory ..	338	1,762,972	+ 1,762,634	+ 362,599	23,074	..	..	385,673	372,558	382,000
Mysore	134,976	70,151	+ 64,825	— 13,335	43,326	..	..	29,991	....	10,000
Kashmir	1,847	2	— 1,845	— 380	..	..	..	— 380	....	....
Total ..	15,444,302	15,444,302	....	....	2,271,236	3,644,755	— 136,217	5,779,774	5,016,343	4,733,000

* Includes Indian States.

(a) Includes Delhi and North-West Frontier Provinces. (b) Excludes Sind, but includes Baroda State.

(c) Includes Ajmer-Merwara.

(d) Only the stocks in Bombay are known, The variation shown here is the variation in the stocks of Indian cotton held by exporters etc. (exclusive of cotton held by mills) between the 31st August 1930 and the 31st August 1931.

(e) The figures for mill-consumption used in this statement are revised figures specially compiled for the purposes of this statement on the basis of the latest information available, and will not therefore agree with the figures published previously.

Imports of foreign cotton into Bengal were 6,238 bales, Bombay 463,484 bales, Sind 6 bales, Madras 722 bales, and Burma nil—Total imports into India were 470,450 bales.

Exports from Burma were 84,112 bales, thus making the total of 3,728,867 bales for the whole of India.

APPENDIX XXI.

SUBJECT 25.—*Cotton Statistics—Publication of All-India Cotton Forecasts by the Committee.*

Secretary's Note.

At the last meeting of the Central Cotton Committee, a resolution was passed asking the Government of India to hand over to the Committee the compilation and publication of the All-India Cotton Forecasts. No reply to this office letter on the subject has been received, so that it cannot come up for discussion at this meeting. Dr. Meek, on his way through Bombay on leave, also asked for a postponement as he wishes to be present when the question comes before the Committee. This is for information.

APPENDIX XXII.

SUBJECT 26.—*Cotton Statistics—Raw cotton trade statistics—Internal trade blocks—Separation of Kathiawar from Gujerat—Reply from the Government of India.*

Secretary's Note.

At the request of the Director of Agriculture, Bombay, and in accordance with the decision of the Central Cotton Committee at its last meeting, the Government of India was requested to separate the Kathiawar States from the Gujerat Trade Block for the purpose of compiling the Raw Cotton Trade Statistics—Railborne Trade Returns. This the Government of India has agreed to as will be seen from the following letter now received.

Copy of letter No. 515-C (8), dated the 5th December 1931, from the Assistant Secretary to the Goverment of India, Department of Commerce, to the Secretary, Indian Central Cotton Committee.

SUBJECT—*Raw Cotton Trade Statistics—Internal Trade Blocks—Separation of Kathiawar from Gujerat.*

With reference to your letter No. 6241 of 1931, dated the 23rd July 1931, on the above subject, I am directed to say that the Government of India agree to the present Gujerat Trade Block being split up into two blocks, *viz.*, Gujerat and Kathiawar, for the purposes of railborne trade returns for raw cotton, and that instructions have been issued by the Director General of Commercial Intelligence and Statistics, Calcutta, to the several railways concerned for the compilation of separate figures for each of these two blocks beginning with the returns for the month of September 1931.

APPENDIX XXIII.

SUBJECT 27—*Fumigation of American cotton—Letter from the Government of India.*

Secretary's Note.

At the last meeting the Committee recommended a rebate of eight annas a bale on all American cotton fumigated during the last financial year. This was communicated to the Government of India and the following reply has been received. A meeting of the Legislative Assembly will be held in January so that the rebate, if sanctioned, will be paid during this financial year.

Copy of letter No. 1852-Agri., dated the 4th December 1931, from the Under Secretary to the Government of India, Department of Education, Health and Lands, to the Secretary, Indian Central Cotton Committee.

Fumigation of American cotton—Accounts for 1930-31.

In reply to your letter No. 1225, dated the 17th November 1931, I am directed to say that the proposals contained in your letter No. 6333, dated the 27th July 1931, on the above subject are under consideration and orders will be issued after they have been placed before the Standing Finance Committee and the Legislative Assembly whose sanction is necessary.

APPENDIX XXIV.

SUBJECT 28—*Merging of the Committee's funds into Provincial Revenues—Reply from the Government of India.*

Secretary's Note.

At its last meeting the Committee passed a resolution requesting the Government of India to make provision for excluding the Committee's grants from Provincial Revenues. Information has now been received that the wishes of the Committee have been acceded to and that the Government of India has accepted the suggestion of our President that the grants received from the Committee should be credited to a separate deposit head. In future the expenditure out of our grants will be budgeted for as ordinary expenditure of the Agricultural Department while the grants received from the Committee will be deposited in the provincial section of the account and the necessary transfer made at the end of the year to the service head concerned.

APPENDIX XXV.

SUBJECT 29.—*Importation of Foreign Cotton Seed.*

Secretary's Note.

At its last meeting, the Central Cotton Committee, by resolution, recommended to the Government of India that the permissible maximum quantity of foreign cotton seed that could be imported in one consignment into India should be raised from one cwt. to nine cwts. The decision of the Government of India on this proposal has not yet been received. This is for information.

APPENDIX XXVI.

SUBJECT 30.—*Investigation into the cost of growing cotton in India—Reply from the Imperial Council of Agricultural Research.*

Secretary's Note.

At the last meeting of the Committee, a long discussion took place on the necessity for carrying out an investigation into the cost of growing cotton in India and it was finally resolved that:

"In view of the difficulty of carrying out an investigation into the cost of production of a single crop, and the fact that this Committee deals only with cotton, the Central Cotton Committee requests the Imperial Council of Agricultural Research to undertake an investigation into the cost of production of the principal crops in the different provinces and States of India."

The Imperial Council of Agricultural Research was accordingly requested to undertake this work for all the main crops of the country. Several members thought the subject so important that they considered the Committee should not wait for the Imperial Council of Agricultural Research to take action but that it should undertake the work itself without delay.

The following reply from the Imperial Council of Agricultural Research to our request has now been received and is for consideration.

Copy of letter No. 2805-Agri., dated the 28th November 1931, from the Secretary, Imperial Council of Agricultural Research, New Delhi, to the Secretary, Indian Central Cotton Committee, Bombay.

"I am directed to say that the Sugar Committee of the Imperial Council of Agricultural Research, which meets on December 7th and following days, will consider possible modifications of its scheme of enquiry into the cost of sugarcane production with a view to accepting the Indian Central Cotton Committee's offer of co-operation. The Vice-Chairman will put their suggestions before the Indian Central Cotton Committee at its meeting on December 14th and if they are generally acceptable will propose the formation of a small committee to settle details."

Note by the Agricultural Expert, Imperial Council of Agricultural Research.

The following suggestions are put forward as a basis of discussion :—

The Sugar Committee of the Imperial Council of Agricultural Research has proposed an investigation into the cost of sugar-cane production and this recommendation has been supported by the Advisory Board of the Council after a further reference to it by the Governing Body. The investigation will therefore be undertaken if sanctioned by the Governing Body of the Council. The Sugar Committee at its last meeting agreed with the proposal that instead of trying to determine the cost of production of sugar-cane alone, it would be better to investigate the cost of production of sugar-cane and rotation crops in order that more exact allowances may be made for the cost of bullocks and labour which would otherwise present great difficulty.

2. The Sugar Committee further recommended that the Imperial Council of Agricultural Research should co-operate with the Indian Central Cotton Committee in an enquiry into the cost of production of cotton, sugar-cane and rotation crops and it left details to be settled with the Cotton Committee by the Vice-Chairman of the Research Council.

3. The principle now adopted will be that the holding will be treated as a unit and costings obtained for all the crops of the holding but with special reference to cotton and sugar-cane. In other words, the main feature of the investigations will be the determination of the costs of production of sugar-cane and cotton. In selecting both villages and holdings these limitations of the scheme will need to be borne in mind, otherwise the scheme would become unwieldy.

4. The agency to be employed in each province naturally will vary but the Research Council's original general scheme was as follows :—

(*a*) One Economist on Rs. 1,500 per mensem (to plan and guide the enquiry and to work out the results).

(*b*) One Assistant Economist at Rs. 350 per mensem in each province (to control the work within the province and to see that it keeps to the scheme laid down). The Assistant Economists would not be under the administrative control of the Chief Economist but the Principal Economist would tour freely and give the Assistant Economist all necessary assistance and technical instruction.

(*c*) For each Assistant Economist in the original sugar enquiry, four Head Investigators on Rs. 200 per mensem were proposed: these should be experienced agricultural assistants with a knowledge of the tract under investigation.

(*d*) Provision was also made in the original scheme for travelling allowance and contingencies, printing, etc., the travelling allowance of the Principal Economist being estimated at Rs. 2,500 for a period of fifteen months; Assistant Economists at Rs. 1,000 each and Head Investigators at Rs. 500 each. The salaries stated above were maxima.

4A. The Imperial Council of Agricultural Research has welcomed the offer of co-operation from the Indian Central Cotton Committee in this important investigation into the cost of production of certain important Indian crops. Probably the best method of working would be to appoint a small joint Sub-Committee of the two bodies which

would work out details of the joint scheme and which would remain in existence to assist the Economist during the course of the enquiry.

5. In order to show more clearly the scope for co-operation between the two branches of the enquiry, the following facts may be found helpful:—

(*a*) In the United Provinces, it is proposed to determine the cost of sugarcane production in two tracts. One of these can quite well be a cotton tract, viz., Meerut or Aligarh districts. In the Punjab similarly two investigations into the cost of sugarcane production are intended one of which will be in the Canal Colonies (Lyallpur) and one probably in the South-east or Central Punjab. The first tract at any rate would also be an important cotton tract. In the case, therefore, of these two provinces, it will be quite simple to share the cost of the scheme.

(*b*) In Bombay, the cost of sugarcane production is to be determined in the Bombay-Deccan Canal area which is of minor importance from a cotton standpoint. On the other hand, there are at least four important cotton tracts where cotton production should be investigated. In Madras, the sugarcane investigation is most likely to take place in the Vizagapatam district which is not a typical cotton district; there would be only one investigation in that province into the cost of sugarcane production. An alternative district in Madras will probably be Chittoor which is moderately important both from the sugarcane and cotton standpoint. As in the case of Bombay, there are important cotton tracts in Madras where costs of cotton production should be ascertained.

(*c*) In the Central Provinces and Berar, there is no sugar-cane worth mentioning and the investigation will deal only with cotton and rotation crops. In Bihar and Orissa, on the other hand, there is no cotton and we should have simply a sugarcane enquiry.

6. These details are to be taken as illustrative rather than final but they suggest that the following general lines of co-operation between the Research Council and the Cotton Committee are practicable:—

(1) The Economist, to direct the investigation and to ensure that it is carried out on a uniform plan, should be shared equally by the two bodies.

(2) In those Provinces where both sugarcane and cotton are under investigation the cost of the Assistant Economist should be shared between the Cotton Committee and the Research Council. In those Provinces where sugarcane is the only consideration, the Research Council should provide the Economist: in those Provinces where cotton is the sole consideration, the Asssitant Economist should be provided by the Cotton Committee.

(3) Where it is possible for the same investigators to carry out both sugarcane and the cotton enquiry as is the case in certain districts of the United Provinces and the Punjab, the cost of investigation will be equally shared between the two bodies; otherwise they would be paid entirely by the Research Council or Cotton Committee according to the nature of the investigation.

A reference has been made to the fact that the provincial agency to carry out work will differ somewhat. In the United Provinces, for example, it has been proposed recently that the investigation should be carried out by the Board of Economic Enquiry. These details could best be settled by the joint Sub-Committee proposed. In addition to appointing a Joint Committee, it seems desirable that the Economist should be engaged as soon as possible as much of the success of the enquiry will depend on a unified scheme of investigation.

7. It is proposed, therefore, that the Indian Central Cotton Committee should now:—

(1) agree to pay half of the cost of the Economist to be appointed by the Imperial Council of Agricultural Research at a salary not exceeding Rs. 1,500 per month,

(2) authorise the Standing Finance Sub-Committee to sanction further grants to the Imperial Council of Agricultural Research for the carrying out of the scheme on receipt of details, and

(3) nominate representatives of the Indian Central Cotton Committee to a Joint Sub-Committee of the Imperial Council of Agricultural Research and the Indian Central Cotton Committee which will work out details and guide the investigation.

APPENDIX XXVII.

SUBJECT 31.—*Annual Report of the Dhulia Cotton Market for the year 1930 31*

Secretary's Note.

The Dhulia cotton market is the first and only market established so far under the Bombay Cotton Markets Act, 1927. Early in 1928, the Taluka Development Association, Dhulia, passed a resolution requesting the Dhulia Municipality and the District Local Board to move Government to apply the Act to Dhulia. This was done—both the local bodies having approached Government with a request for a regulated cotton market. The leading trade members also made repeated requests. The Bombay Government agreed and the Dhulia cotton market was duly opened in December 1930. It has had nearly a year's successful working to its credit as will be seen from the copy of the Annual Report which is for information.

ANNUAL REPORT OF THE DHULIA COTTON MARKET FOR THE YEAR 1930-31.

Introduction :—For a long time, the Government of Bombay had in view the establish ment of a regulated cotton market to be run on lines similar to those in the Berars but with certain improvements. The cotton market Act was accordingly passed in 1927 and rules thereunder were framed in 1929. In February 1928, the Dhulia Taluka Development Association passed a resolution requesting local bodies viz., the District Local Board and the Dhulia Municipality to move Government to apply the Act to Dhulia. The District Local Board, West Khandesh, passed a resolution accordingly on 11th September 1928. The Dhulia Municipality also followed suit. In addition, the leading trade members, Gulabchand Shet and the late Kashinath Shet showed considerable enthusiasm in making repeated requests for a well organised and regulated market for Dhulia. The market yard (7 acres and 31 gunthas) was offered at a nominal rent and free of altered assessment for a period of three years by Mr. Colabawalla and Ponkar and the Manmad Manufacturing Company. As a result of this ready response from the local factory owners, merchants, agriculturists and local authorities, Government selected Dhulia as the first place best suited for the organization and conduct of a regulated cotton market.

It was first intended to commence the operations of the Act at the commencement of the season, viz., early in October but owing to delay in the publication of the names of the members of the Committee—elected as well as nominated—and in the decision of other questions, the Committee could not meet till 30th September 1930.

Members.—The following members constituted the first Cotton Market Committee for the triennial period ending August 1933 :—

Cotton growers.

1. Mr. Uttamrao Bhilajirao Deshmukh, Morana (Taluka Dhulia).
2. Mr. Sampatrao Ganpatrao Patil, Mukhti, (Taluka Dhulia),
3. Mr. Tikaram Kashiram Patil, Bhadna (Taluka Sakri).
4. Mr. Lahu Chimnaji Patil, Virdel (Taluka Sindkheda).
5. Mr. Govindrao Zaga Patil, Dhulia,
6. Mr. Jairam Krishna Patil, Ghodada (Taluka Sakri),
7. Mr. Yashavantrao Dalpat Patil, Varshi (Taluka Sindkheda).

Cotton Traders.

8. Mr. J. P. Tarapore, B.A.
9. Mr. Gulabchand Hiralal Shet.
10. Mr. Chandrabhan Nandram Shet.
11. Mr. Chunilal Maganlal Shet.

Representatives of Local Bodies.

12. Mr. Motiram Kadu Patil (District Local Board)—From 1st October to 29th June 1931 and

    Mr. Dipchand Sapadu Patil, from 30th June onwards.

13. Mr. Ganpatrao Moghaji Varade (Dhulia Municipality).

Government Nominee.

14. Mr. S. H. Prayag, M.Ag., Cotton Breeder, Khandesh, Dhulia. (Mr. S. H. Prayag was elected Chairman for the year. During his absence on leave for a month and a half Mr. Govindrao Zaga Patil held the office of Chairmanship).

The following were other office bearers for the year 1930-31 appointed by the Committee for the conduct of market business.

Controlling Sub-Committee.

1. Mr. S. H. Prayag,
2. Mr. J. P. Tarapore,
3. Mr. Uttamrao Bhilajirao Deshmukh.

Disputes Sub-Committee.

1. Mr. J. P. Tarapore,
2. Mr. Govindrao Zaga Patil,
3. Mr. G. M. Varade.

Auditors.

1. Mr. G. M. Varade.
2. Mr. Govindrao Zaga Patil.

Vice-Chairman.—Mr. Ganpatrao Moghaji Varade remained as Vice-Chairman till 21st April 1931, when Mr. Govindrao Zaga Patil took his place as Mr. G. M. Varade ceased to be on this seat owing to re-election of the members in the Municipality.

Working of the regulated market and difficulties encountered.—In the beginning, the Committee experienced considerable difficulties. A large section of the cotton merchants though in favour of the application of the Act to Dhulia, desired to postpone it till the next year for reasons of trade depression and dislocation of traffic in general due to mass Civil Disobedience Movement. Attempts were made to approach the Collector for its postponement and to move the Dhulia Municipality to send a resolution of postponement. But as the Committee had already started its work and had begun its sittings to frame the bye-laws, it was considered undesirable to postpone the working.

As the Committee had to start its work without the necessary funds, Government was approached for a loan of Rs. 5,000. To avoid delay, Government in their resolution (G. R. R. D. No. 374-28, dated 5th November 1930) immediately sanctioned an advance of Rs. 3,000 as part of the loan. The by-laws had to be framed as the Committee could not function without these. In this, the Committee received considerable help from the late Rao Saheb K. M. Pawar (whose untimely death, the Committee so deeply mourns). These by-laws were submitted on 13-10-1930 to the Commissioner, C. D., Poona, who was kind enough to give his immediate sanction.

It was at first announced that the market was to be opened on 27th November 1930, at the hands of the Commissioner, C. D., Poona. This was resented by the cotton merchants and "Hartal" was declared. The trouble assumed a serious form paralysing the trade for some time, the market being closed for five days. Wiser counsels soon prevailed and the situation was reconciled by an amicable agreement between the cotton traders and growers. The market was opened on 1st December 1930. The delay in the

opening of the market by a month and a half after the season had commenced caused some inconvenience to the strict adherence of some of the rules—Licenses had to be given to weighmen who had already been engaged by the cotton traders; open bidding could not be brought into force for some time; the cotton could not be graded and valued separately owing to the mixed nature of the cotton brought into the market. Emergency meetings had to be held and certain modifications in the by-laws had to be made. With the opening of the regulated market, there were indications of slight reduction in the rates offered for seed cotton, owing to the disallowance of all unauthorised trade allowances to which the traders were accustomed. This had a temporary set-back on the trade; some of the seed cotton carts that had come or should have come to Dhulia markets were found going to Amalner market in the hope of getting higher rates. In order to impress on the minds of cotton growers the benefits arising out of such regulated market, a vigorous propaganda had to be undertaken.

Propaganda work.—A leaflet showing the benefits to be derived from regulated market was at first printed and a thousand copies were distributed in the area that served the Dhulia Cotton Market, viz., three talukas of Dhulia, Sakri and Sindkheda. A dozen magic lantern slides showing the aims and objects of regulated markets were prepared and lectures with the help of these were delivered at the following important centres:—

(1) Kusumba, (2) Wani, (3) Arvi, (4) Songir, (5) Mukti, (6) Nyahalod, (7) Nardana, (8) Dondaicha, (9) Chimthana, (10) Sindkheda, (11) Chanda, (12) Shirud, (13) Borkund, (14) Vinchur, (15) Mordad.

In addition, an officer of the Agricultural Department visited the ginnery every day for about 20 days to watch the progress, to settle the disputes and to make the necessary suggestions. Some enlightened cultivators and few representatives of the growers spread the knowledge of the obvious benefits of such a market among the illiterate and ignorant cotton growers both in the market yard and in the *mofussil*. All this had the desired salutary effect.

The total number of carts—seed cotton and lint—that entered the market from 1st December were as follows:—

Kind of cotton.	*No. of carts.*
Seed-cotton	32,522
Lint	1,296
Cotton waste (low grade cotton) ..	96

Statement of receipts and expenditure.—See table enclosed.

Staff engaged:—The following was the staff engaged during the year:—

Serial No.	Designation.	Pay Rs.	Allowance. Rs.	Remarks.
		p.m.	p.m.	
1	Superintendent	100	10	Permanent.
2	Clerk	25	Nil.	,,
3	Clerk	25		Temporary.
4	Gateman	17		,,
5	,, ...	17		,,
6	,, ...	17		,,
7	,, ...	17		,,
8	,, ...	17		,,
9	Peon	16		Permanent.
10	Night watchman	15		Temporary
11	,, ,, ...	15		,,
12	Sweeper	10		,,

Meetings.—The first meeting was held on 30th September 1930. As the by-laws had to be framed, the number of General Committee and Sub-Committee meetings held in October and November 1930 were frequent, there being in all 10 meetings during the course of two months. Emergency meetings were also held on 27th November and 8th December to settle certain vital issues. The total number of meetings in all was twenty-two. There was no occasion on which a meeting had to be postponed for want of a quorum.

Benefits derived.—The first outstandig feature of this market which seems to have appealed to the cotton grower is the provision for the hearing of his complaints by the Market Superintendent and by the Dispute Sub-Committee. In the unregulated market the grower is entirely at the mercy of the trader. Since first December, 167 disputes were settled by the Superintendent and 8 by the Dispute Sub-Committee. Though the task entrusted to this Committee was arduous, it is a matter of gratification to note that this Committee was able to settle the disputes to the satisfaction of both the parties and in no case was their decision set aside. The grower finds that he is given a squarer deal than what he would have got before. The other benefits obtained by the grower can be summed up as follows :—

(1) Facilities for the stay of carts during odd hours.
(2) Safety of cotton carts from theft.
(3) Announcement of daily cotton prices.
(4) Regularity and control of fees levied by cotton traders viz., Adat, Panjarapole, etc.
(5) Correct weighment.
(6) No unauthorised deductions in weight and no other trade allowances except those included in the by-laws.
(7) Proper value for the quality of cotton.

The above does not represent all that can be desired. There are still many defects and long established abuses which have yet to be overcome. Disputes arise as regards the deductions in rates or allowances to be given in cases of cotton containing earth, sand or moisture and formula is to be developed and is before the consideration of the Committee for settling these difficult questions. A good deal of improvement is, therefore, necessary before the benefits of such a market may well be realised. To effectively carry this out, alterations and modifications in the existing rules and by-laws are also necessary and the Committee has approached the authorities concerned for the necessary changes. It is hoped that most of the defects will be remedied in the course of a year or two.

Visitors.—During the year the gentlemen who had been specially deputed by the authorities concerned to pay their visits to this market, were (1) Mr. S. S. Salimath, B. Ag., Deputy Director of Agriculture, S. D., Dharwar, (2) Mr. V. V. Gadgil, B. Ag., Deputy Director of Agriculture, Konkan, Ratnagiri, (3) Mr. Syed Ali Hussain, B.A., L. T. deputed from the Managing Director, Bombay Provincial Bank. All of them expressed their satisfaction for a good beginning made in the initial stage of such a regulated market.

Conclusions.—It is a matter of gratification to note that the market, on the whole, has come out successfully through a period of unprecedented strain and though it had to face opposition from the cotton traders in the beginning, the Committee received hearty co-operation from them after the starting of the market. In the working of the Committee every help was given by all the officers of the Revenue and Agricultural Departments. The Committee is very much thankful to the Commissioner, C. D., and the Collector of West Khandesh, for the prompt assistance rendered to the Committee in the matter of advance which the Committee so badly needed in its initial stage of working. The Committee also feels very grateful to Mr. C. G. Marathe, Huzur Deputy Collector, Dhulia, for the valuable help rendered by him in the framing of the by-laws and in the modifications and amendments to the rules and by-laws and in guiding the meeting properly.

In the conduct and discharge of my work, I am glad to report that I received the hearty co-operation of all the members of the Committee and especially those of the Dispute Sub-Committee, viz., Messrs. Tarapore, Ganpatrao Varade and Govindrao Patil. Among the staff, Mr. Y. V. Salunkhe deserves special mention for the zeal and enthusiasm he put into the work by daily attending the factories and by settling the disputes on the spot. Mr. Lalsing Patil also deserves praise for his hard work.

Dhulia may well be proud of being the pioneer in the opening of a regulated market in the Bombay Presidency and especially at a time when the economic depression was very great. It is hoped other markets will soon come under the regulations and make trade smooth and free from abuses.

(Sd.) S. H. PRAYAG,
Chairman,
Cotton Market Committee, Dhulia.

Dhulia,
1st September 1931.

COTTON MARKET COMMITTEE, DHULIA.

Statement showing receipts and expenditure during the year 1930-31 (from 12th October 1930 to 31st August 1931).

RECEIPTS.		Rs	a.	p.
(1)	Market cess	4,563	3	0
(2)	Registration and License fee	2,855	12	0
(3)	Ground rent	97	8	0
(4)	Miscellaneous	296	0	0
(5)	Printing	132	0	0
(6)	Badges	25	2	0
(7)	Postage and telegram	45	4	0
(8)	Lighting	1	8	0
(9)	Municipal tax etc.	3	2	6
(10)	Commission	1	5	6
(11)	Government advance	2,000	0	0
(12)	Dispute Sub-Committee's fee	2	0	0
(13)	Travelling allowance (refund)	0	6	0
	Total ..	10,023	3	0

EXPENDITURE.		Rs.	a.	p.	Rs.	a.	p.
(1)	Establishment	1,849	13	0			
(2)	Registration and license (refund)	711	8	0			
(3)	Postage and telegram	401	15	6			
(4)	Ground rent	15	0	0			
(5)	Miscellaneous	304	11	6			
(6)	Lighting	171	13	6			
(7)	Printing	680	12	0			
(8)	Badges	303	8	0			
(9)	Building	4,392	2	9			
(10)	Furniture	274	6	0			
(11)	Municipal water tax etc.	39	9	6			
(12)	Stationery	78	13	9			
(13)	Travelling allowance to members	240	8	0			
	Total expenditure ..				9,464	9	6
	Balance with Urban Bank, Dhulia as under :—						
	Current a/c ..	Rs.	135	3 3			
	Savings Bank a/c ..	Rs.	340	2 0			
	Balance with Mr. Ratanshi Hirji Tarawalla, Bombay.	Rs.	25	0 0			
	Balance on hand ..	Rs.	58	4 0	558	9	6
	Total ..				10,023	3	0

Sd/—
Superintendent,
Cotton Market, Dhulia.

Sd. S. H. PRAYAG,
Chairman,
Cotton Market Committee, Dhulia.

APPENDIX XXVIII.

SUBJECT 32—*Investigations into finance and marketing of cultivators' cotton—Report of the Registrar, Co-operative Societies, Bombay Presidency, regarding formation of Co-operative Sale Societies in Sind.*

Secretary's Note.

The Special Sub-Committee, which considered the report on an investigation into the finance and marketing of cultivators' cotton in Sind, recommended that Co-operative Cotton Sale Societies should be formed to provide the growers with a better outlet for their produce. This was brought to the notice of the Bombay Government who were asked to take the necessary action.

The Bombay Government have now sent extracts from the report of the Registrar of Co-operative Societies on this subject. The Registrar states that the formation of co-operative Sale Societies and the establishment of regulated markets would help the farmers to realise a better price for their produce, but additional superior staff would be required for initiating and supervising such societies, which it is not possible to provide owing to present financial stringency. As will be seen in the accompanying letter, the Government of Bombay agree with the views of the Registrar.

Copy of letter No. 4842-A-24, dated the 21st October 1931, from the Chief Secretary to the Government of Bombay, Revenue Department, Bombay, to the Secretary, Indian Central Cotton Committee, Bombay.

SUBJECT.—*Cotton —Investigation into the finance and marketing of cultivators'.*—

In continuation of the letter from this Government No. 4842-A-24, dated 7th September 1931, I am directed by the Government of Bombay (Transferred Departments) to forward for your information extract paragraphs 6 and 7 of the letter from the Registrar of Co-operative Societies No. A. S. C. 24, dated 1st August 1931, regarding the formation of the co-operative sale societies in Sind with a view to providing the growers with a better outlet for their produce and to state that Government agree with the views expressed therein.

Extract paragraphs 6 and 7 of the letter from the Registrar of Co-operative Societies, No. A. S. C. 24, dated 1st August 1931.

6. *Cotton Sale Societies.*—Finally, as regards the recommendation of the Committee, printed on page 2 of the Report, viz., "That Co-operative Sale Societies should be formed to provide the growers with a better outlet for their produce" : In this connection I would observe that Co-operative Sale Societies would undoubtedly furnish the best means of enabling the cultivator to secure an adequate price, especially for cotton of superior quality. There are at present 27 Cotton Sale Societies in the Presidency, including two in Sind. Their activities are described in detail in the annual reports of the Co-operative Department. In Sind, these societies have not been as successful as those in the Presidency, for reasons indicated in the Report. In Sind, there are no organised market centres. The cotton is generally bought from the zamindars either by the gin owners or by export firms through their up-country agents. The number of middlemen is sometimes larger. Sometimes, the agriculturists sell the standing crops ; but such sales form a very small percentage of the total sales. Only 9.1 of the produce, belonging to 20 per cent. of the cotton cultivators, was sold in this way (see clause (5) Part I of the Report).

7. The majority of the cultivators sell the cotton at the village, both because of the cost and difficulty of transport and the trouble and loss involved in selling in an unregulated and unfamiliar urban market. In the villages, disputes about quality and price are rare. Sale in the villages further enables the cultivator to defer disposal, if the price offered appears to be low. He cannot do this, once he takes his cotton to the market or to a distant ginning factory. If an allowance is made for these factors and for the transport and other charges, generally speaking the price offered in the villages is not unfavourable to the cultivator. The establishment of well regulated cotton markets and the formation of cotton sale societies would, no doubt, remove most of the difficulties, which the small cultivator experiences at present and help him to realise a better price for his crop. Further development in this direction would, however, require additional superior staff, for initiating and supervising such societies, which we cannot afford to provide at the present moment, owing to the existing financial stringency.

APPENDIX XXIX.

SUBJECT 33.—*Export Duty on raw cotton in Bombay.*

Secretary's Note.

The Bombay Corporation has finally passed the proposal to levy a cess of 4 annas a bale on all cotton exported from Bombay. Last year, when the proposal was first mooted, the Committee made a vigorous protest against it and it did so again in the month of October when the matter came a second time before the Corporation. The Committee is concerned only with the effect such a tax will have on the price paid to the grower. As the Government of Bombay has not yet accorded its sanction to the proposal, a resolution passed by the full Committee might have the desired effect.

APPENDIX XXX.

SUBJECT 34.—*Provincial Cotton Committees—Proceedings of the Central Provinces Provincial Cotton Committee.*

Secretary's Note.

Attached will be found a copy of the Minutes of a meeting of the Central Provinces Provincial Cotton Committee held on the 17th October 1931. It is refreshing to find at least one Provincial Cotton Committee alive and these minutes prove that Provincial Committees are capable of performing most useful work. It is satisfactory to know that the Cotton Transport Act is working smoothly in the Central Provinces and Berar, *vide* Subject No. 2.

In view of the remarks made in the note under Subject* 22, it is interesting to find that the Director of Agriculture, Central Provinces has agreed that schemes necessitating the grant of funds from the Central Cotton Committee should first be examined in detail by the Provincial Cotton Committee (Subject 3).

The Government of the Central Provinces is awaiting the views of the Central Cotton Committee regarding the effect of pools before deciding what action should be taken, *vide* Subject No. 9.

A resolution was passed recommending that the sale of *Verum* cotton should be done by Associations and Societies under the direction of the Co-operative and Agricultural Departments (Subject 7). The Central Cotton Committee will, I am sure, give every support to this suggestion.

Proceedings of the meeting of the Central Provinces Provincial Cotton Committee held on Saturday, the 17th October, 1931.

PRESENT.

F J. Plymen, Esq., C.I.E., I.A.S.—Chairman, Director of Agriculture, C.P.
R. N. Banerjee Esq., I.C.S., Director of Industries, C.P.
Rao Bahadur M. G. Deshpande,
T. Currie, Esq.
M. P. Kolhe, Esq., M.L.C.
M. R. Dokras, Esq.
D. N. Mahta, Esq., Economic Botanist for Cotton, C. P.—Secretary.

VISITORS.

J. C. McDougall, Esq., Deputy Director of Agriculture, Economics and Marketing, C. P.

J. S. Gurjar, Esq., Agricultural Assistant.

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* Indian Central Cotton Committee-24th Meeting.

In opening the proceedings, the Chairman made a reference to the reports he had received regarding the condition of the cotton crop this year and said that the outlook was not free from anxiety. Continuous rain, lack of sunshine and floods in some areas had seriously damaged the crop and a big reduction in outturn was feared. He thought that this was a good opportunity to hear the opinions of members of the Committee, which he would communicate to Government, if necessary.

Rao Bahadur Deshpande said in his opinion the conditions this year were as bad as they could be. Cotton crop was almost a complete failure and juar too had been considerably damaged. He thought that much of the land under cotton would be ploughed up and re-sown with rabi crops.

Mr. Kolhe said he did not altogether share Rao Bahadur Deshpande's views on the subject. He agreed that cotton crop was a failure but he did not think there was much chance of the land being re-sown with rabi crops. To begin with, there was the difficulty of obtaining sufficient seed of wheat for sowing purposes and secondly, even if seed were available, in his opinion it would be too late to prepare the land for rabi sowing as the rain was still continuing. He thought that juar so far was fair but he feared that if the rain continued much longer it would deteriorate in quality. He thought it was possible that some of the land would be re-sown with gram.

Mr. Dokras said that in his opinion Verum 262 had suffered the most.

The Chairman said the Department might not have enough rabi seed of its own but, if re-sowing was considered desirable, some arrangement would have be to made for it. He said he would make a note of it and enquire from the Deputy Director of Agriculture, Western Circle, what could be done in this connection.

Mr. Banerjee enquired if there was any chance of a renewed growth giving a further outturn of *kapas*. It was his experience that whenever Berar had late rains there was good further yield.

The Chairman replied that some additional yield would no doubt be obtained from the secondary growth forming fresh flowers but he did not think that much could be expected in this respect from a rotten or worn-out plant.

SUBJECT No. 1.—Central Provinces Cotton Market Bill for the cotton growing districts in the Central Provinces.

Mr. Kolhe briefly explained the purport and scope of his Bill which had already been introduced in the Legislative Council and asked the Committee to support it.

The Chairman said there was no essential difference in this respect between the Central Provinces and Berar and, therefore, a similar Bill should apply in the Central Provinces as in Berar.

Rao Bahadur Deshpande said he did not know what the Bill contained and, therefore, he was opposed to the Committee supporting it He understood that a copy of the Bill had been forwarded to the Indian Central Cotton Committee but had not yet been considered. In his opinion, a copy of the Bill should first be circulated to members of this Committee and then examined at a subsequent meeting before any opinion was expressed on it.

Mr. Banerjee pointed out that the Bill had already been published in the Central Provinces Gazette. He said that Mr. Kolhe's draft was based on the Berar Cotton and Grain Markets Law and had been approved by the Select Committee in the last Council and therefore he thought that, on principle, the Committee should have no objection to it. He thought before the Bill was passed by the Council, the Local Government was likely to give the Committee an opportunity of recording its opinion on it.

Mr. Kolhe said he had no objection to the Bill being first examined by the Committee. He would let the Secretary have a copy for circulation to members.

The Chairman, in winding up the discussion, said that as an advisory Committee our opinion should come after the public had expressed theirs. He would, if necessary, address the Revenue Secretary on the subject and say that this Committee considered that it should be given an opportunity of expressing an opinion on the Bill.

This was approved by the Committee.

SUBJECT No. 2.—Cotton Transport Act as applied to Central Provinces and Berar

Mr. Kolhe said that his object in bringing up this subject for discussion was to find out how the Act had worked in practice.

The Chairman said that he issued licenses as required and it was really for the trade members to say what they thought of it.

Mr. Currie said that the complaints he had heard were that in some cases the license did not arrive in time, thus causing unnecessary delay and demurrage.

The Chairman said that some people had not understood the working of the Act. There was a certain amount of misinterpretation of it in the beginning but he thought that that had been put right and the Act was now working well. He assured the Committee that every assistance was given to the trade in the matter and that licenses were issued with the utmost promptness.

It was recorded that after a little trouble due to want of experience, the Act was now working well.

SUBJECT No. 3.—Complaints regarding the marketing of Verum 262 last year and the desirability of issuing a statement of facts to remove any misunderstanding or prejudice which may exist against the Agricultural Department.

The Chairman said that this matter had been gone into fully in the Report of the Deputy Director of Agriculture, Economics and Marketing, and whatever trouble there was had now died down.

Mr. Kolhe said that in his opinion the position required to be explained fully.

Rao Bahadur Deshpande said he wanted first of all to know the function and rights of the Provincial Cotton Committee. Had this Committee any right to discuss the financial aspect of the Verum marketing scheme ? In his opinion it was the duty of the Department to consult members of this Committee regarding the utilisation of any funds granted by the Indian Central Cotton Committee. They had so far never been consulted nor allowed any say on matter connected with the administration of such funds.

Mr. Banerjee said as he understood the position, the Indian Central Cotton Committee made grants to the Director of Agriculture for approved schemes put up by him. Several members of this Committee were also members of the Central Cotton Committee and they should have said at the time when schemes were sanctioned by the Committee that the Director of Agriculture should administer the funds in consultation with members of the Provincial Committee. He wished to inform members that Government had considered the whole case connected with the marketing of Verum cotton last year and were satisfied that the course adopted by the Agriculture Department was the best possible under the circumstances.

Rao Bahadur Deshpande said all he wanted was that schemes for grant of money from the Indian Central Cotton Committee should in future be put up in consultation with this Committee. He had recently heard of a scheme for prizes for Verum cotton but did not know what it was or who provided the funds.

The Chairman said Mr. McDougall had a scheme worked out for award of prizes for pure Verum cotton but owing to abnormal weather conditions it had had to be modified. He asked Mr. McDougall to explain the scheme adopted for the marketing of Verum this year.

Mr. McDougall explained the scheme for the marketing of Verum in 1931-32, as detailed in his Note No. 4 of 1931, copies of which had been circulated to members of the Committee.

In summing up the debate, the Chairman said he was willing to accept the decision of the Committee that schemes for grant of funds to be submitted to the Indian Central Cotton Committee should be first examined in detail by the Provincial Cotton Committee. He pointed out however that a number of the members of the Provincial Cotton Committee were members of the Central Cotton Committee also.

Rao Bahadur Deshpande next referred to complaints he had heard regarding the manner of distribution of profit and loss over certain hedge-sales of last year and asked if he could be given full details of the financial side of these sales.

The Chairman said he was inclined to accept Mr. Banerjee's suggestion on this matter that any one who had any specific complaints should put them forward and they would be investigated and a reply given.

The Committee agree that this would meet the case.

SUBJECT No. 4.—Import of American Cotton into the Central Provinces and means for preventing such import by propaganda.

Mr. Kolhe said he wanted to know to what extent American cotton was imported into these provinces and how this could best be prevented to safeguard the interests of the cotton grower.

Mr. Currie said the amount of imported cotton used in the mills was only about 2%. He thought India wanted to spin finer counts and if suitable cotton for this purpose could not be produced in the country, he saw no objection in importing foreign cotton.

Mr. Banerjee said he was in favour of such import as he thought that by this means India would be able to produce finer materials at home. He wished to point out that the bulk of the imported cotton was not American but Egyptian. The total quantity imported was, however, very small.

The Committee was satisfied that no action was necessary.

Subject No. 5.—Results of "Enquiry into ginning and pressing factory pools."

Subject No. 9.—Steps taken by the Local Government to carry out the resolution proposing enquiries regarding the effect of the "Pool system" on the prices of cotton.

The Committee considered items No. 5 and No. 9 together.

Mr. Banerjee briefly explained the action that had been taken by Government and said that a report had been sent to the Indian Central Cotton Committee who were taking up the matter. Before deciding on any legislative action, Government would like to know the opinion of the Indian Central Cotton Committee.

The Committee was satisfied that the matter was receiving adequate attention.

Subject No. 6.—Improvement in the present method of marketing Verum cotton.

Subject No. 7.—Need for setting up sub-societies on the lines of the Hubli and Dharwar Cotton Sub-Societies to attain the object outlined in item No. 6 above.

The Committee considered items No. 6 and No. 7 together.

Mr. Dokras said that he had put up these subjects before the Committee because he felt that the crying need of the moment was improvement in the present method of marketing cotton. This province was contributing a considerable sum of money to the funds of the Indian Central Cotton Committee and he thought it was only right to expect that that Committee would help with funds and advice the working of any scheme designed to effect improvement in the method of marketing cotton. In this opinion the work that the Agriculture Department was now doing in this direction should be gradually transferred to Sales Societies organised under the supervision of the Co-operative Department.

Mr. Banerjee explained that this matter had been discussed before. The chief item in the organisation of Sales Societies on the lines of Hubli and Gadag was grading for which technical advice was necessary. He thought that the present method of selling Verum was at the basis Co-operative.

The Chairman said he was quite willing to hand over the marketing work to co-operative societies developed at suitable centres but he would point out that the Central Cotton Committee might not be prepared to finance all these societies. The chief requirement, he thought, was technical advice.

After further discussion, Mr. Dokras moved and Rao Bahadur Deshpande seconded the following resolution which was carried unanimously :—

RESOLUTION 1.—"That this Committee feels that the organisation for the sale of Verum cotton should be gradually transferred to Associations and Societies under the guidance and supervision of the Co-operative and Agriculture Departments."

Subject No. 8.—Suitability of Verum 262 to the soil and climate of Berar.

Rao Bahadur Deshmukh's letter on the subject was read.

Mr. Mahta, in explaining the position, said that Verum 262 had pushed itself in Berar even in non-wilted areas which was sufficient proof of its superiority. The trade now-a-days looked for a cotton which could spin finer counts and this requirement was met by Verum 262. The alternative was Roseum or Jari and if anyone found these more profitable to grow, he saw no reason why they should not do so, though in his opinion the day of Roseum or similar cotton was over. He wished to point out that Verum 262 was by no means the last word in cotton. They had two new selections from Verum—early and late—and he thought that one or other of these three strains should meet the varying requirements of the cotton growing tracts of Berar and the Central Provinces.

Mr. Currie, in supporting Mr. Mahta, said he considered it a big achievement that this province had been able to grow a cotton which was sold "on" Broach.

The Committee agree that no action was necessary.

Subject No. 10.—Desirability of introducing in other places the practice successfully adopted in Amraoti and Arvi of weighing cotton by scale-pans.

Rao Bahadur Deshpande, in opening the discussion, said that he had visited Amraoti and Arvi where the practice of weighing cotton by scale-pans was in vogue and had also consulted many friends on the subject. In his opinion this method was more desirable in the interests of the cultivator who did not understand the weigh-bridge system.

The Chairman pointed out that scale-pans were not infrequently a source of cheating.

Mr. Banerjee invited a reference to the Report of the Indian Central Cotton Committee on this subject and said that that Committee had condemned scale-pans and recommended the use of the platform method.

After further discussion, it was felt that the subject was one on which opinions were divided. The Committee, therefore, decided that the question should be further looked into.

Subject No. 11.—Steps taken to stop the malpractice of moistening bojas with water to increase their weight.

The Chairman said that in his opinion nothing could be done in this matter without legislation and the propaganda only was not likely to produce successful results. The Malpractices Sub-Committee of the Indian Central Cotton Committee had dealt with the subject and come to the same conclusion.

The Chairman then moved and Mr. Banerjee seconded the following resolution which was carried unanimously :—

RESOLUTION No. 2.—"That this Committee confirms its former opinion that in dealing with the malpractice of watering cotton, propaganda will not meet the case and that, therefore, legislation is necessary."

Subject No. 12.—Recommenation to Local Government to place a sum of Rs. 4 lakhs at the disposal of the Agriculture Department for giving advances to cultivators requiring financial assistance and preparation of a suitable scheme for collective marketing of cultivators' cotton.

The Chairman explained the position and said that the Local Government had set aside a sum of Rs. 2 Lakhs for this purpose and a suitable scheme for the marketing of Verum cotton and giving advances to cultivators who liked to join the organisation had already been formulated and explained to the Committee. He did not think there was anything more to be done at this stage.

It was agreed that no further action was necessary.

(*Subject not on the Agenda*).—Export duty on cotton exported from Bombay.

Mr. Kolhe said he wished to draw the attention of the Committee to the proposal of the Bombay Municipal Corporation to levy an export duty of four annas per bale on cotton exported from Bombay. He thought the Committee ought to protest against

this as at the present price of cotton, any further tax would hit the grower severely. In his opinion, even the existing non-refundable duty of one rupee per bale on raw cotton sent into Bombay was too much.

He accordingly moved the following resolution :—

RESOLUTION No. 3.—"That this Committee feels that the proposal of the Bombay Municipal Corporation to levy an export duty of four annas per bale on cotton exported from Bombay is detrimental to the interests of the cotton growers of this province and the cotton trade of Bombay and therefore requests the Local Government to move the Government of Bombay to withhold their sanction to the proposal."

The resolution was seconded by Rao Bahadur Deshpande and carried unanimously.

D. N. MAHTA,

Secretary,

Provincial Cotton Committee,

Central Provinces.

APPENDIX XXXI.

SUBJECT 35.—*Re-use of old Hoops.*

Secretary's Note.

The following letter and enclosure from the East India Cotton Association was considered at the last meeting of the Local Sub-Committee when it was decided to refer the subject to the Central Cotton Committee so as to elicit the opinions of members on the general question of the working of the Cotton Ginning and Pressing Factories Act.

Severe criticism of the working of this Act is contained in the report submitted by the Bombay Chamber of Commerce on the past work and future policy of the Committee, and the opinion is expressed that the Act should be strictly enforced or, in the views of some members of the Chamber, repealed. Before the Government of India amended Rule 7 of the Rules under the Act, which deals with the method of marking bales, considerable trouble arose in Bombay regarding faulty marking and certain merchants were taking advantage of technical infringements of the Rules to get out of their contracts in a falling market. The old rule laid down a very meticulous method of marking and the omission of an asterisk on one bale in a tender was sufficient to cause the rejection of the whole tender. The Rule was amended in 1929 so as to allow of any form of marking in English characters and figures provided the marks were clearly decipherable, and "if the special mark and the serial number are stencilled in ink, they shall be stencilled on the lashed side of the bale." The East India Cotton Association also altered their rules making possible the rejection of those bales only which were faultily marked and not the whole tender. Since this amendment came into force, the Act has worked smoothly so far as the Committee is aware. The question of the use of old hoops has been before the Committee on previous occasions, and the Government of India was requested to amend the Rules so as to prohibit it but this request was refused. The amendment of Rule 7 was considered to give Trade Associations sufficient latitude to decide whether duplicate marks on hoops were the result of accident or design and if old marks were sufficiently deleted, no difficulty should arise. The use of old hoops is likely to increase and this may become a serious problem in the future. It is for consideration whether the stencilling of press marks on the hessian should not be made the only method of marking bales. Hessians are not used a second time to the same extent as hoops and the amendment proposed above would solve the difficulty.

If the existence of duplicate marks on hoops is likely to become a menace, it proves that the marking of bales is being carried out much more generally than certain members of the Trade would lead one to believe. The number of cases of faultily marked bales reported to the Committee by the East India Cotton Association during the last year has been very few, though, of course, these comprise only bales tendered in fulfilment of a contract and do not include 'spot' cotton. Certain mills in Calcutta report to the Chief Inspector of Factories any bales received with faulty marks and the Committee

has been able to take action. If other mills in India were to follow suit, many more irregularities would undoubtedly come to light but the Committee would then be able to remedy this by reporting the cases to the proper authorities. If the Trade does not co-operate it is impossible for this Committee to take action. On several occasions the Committee has asked the Government of India to request Local Governments to see that the Act is more rigidly enforced and that heavier penalties for infringements are inflicted. Most Local Governments have complied. The Act was intended to be worked by the Trade and if it is not working as effectively as ths Committee has been led to believe the fault lies with the Trade alone for condoning infringements.

Under the very fluctuating market conditions of last year when one would have expected every advantage to be taken of infringements to enable merchants to get out of their contracts, only 352 bales were reported by the East India Cotton Association as having been rejected for this reason. This does not seem to bear out the argument that there is a general laxity in the marking of bales. Another argument to disprove the assertion that the Act is more honoured in the breach than in the observance is the fact that all Trade Associations in India were asked at the beginning of this year to give the experience of their members regarding the marking of bales. The replies received are most encouraging and instructive. A copy is attached.

The Cotton Ginning and Pressing Factories Act was passed for the purpose of tracing back to their source bales which were found to be false packed, etc. Indian cotton had an unenviable reputation in most parts of the world and it was to maintain its good name that this legislation was undertaken. Since the marking of bales was made compulsory, practically no cases have been reported from abroad or from India of false packing. Instances have been reported of excessive seed, damping and oil stains and when the press marks have been supplied, action has been possible. There cannot be the slightest doubt that the Act has been of the greatest service to Indian cotton and the criticism levelled at it by the Bombay Chamber of Commerce comes ill from a Body whose members have done so little to help its enforcement.

Copy of letter No. 1727-BL-1, dated the 27th November 1931, from the Secretary, East India Cotton Association, Bombay, to the Secretary, Indian Central Cotton Committee, Bombay.

Re : Use of old hoops without removing marks.

I am directed to enclose herewith a copy of letter No. RS/SV, dated the 12th November 1931, received from Messrs. Volkart Brothers, a member of my Association. The Board of Directors of my Association have considered this letter and having regard to the fact that they constitute the final Appellate Authority on questions which have to be referred to arbitration under By-law 38, they are not in a position to pronounce any opinion upon a hypothetical case put forward by Messrs. Volkart Brothers and they have been informed accordingly.

My Board, however, wish to bring to the notice of your Committee that it is absolutely essential in these days of acute depression that owners of Cotton Pressing Factories should economize the use of material required for the purposes of pressing bales in factories. They consider that there should be no ban on the re-use of old hoops by factory owners provided, of course, old marks have been so deleted that no doubt can arise as to the identity of the bale. My Board would be glad to be favoured with the views of your Committee on this point.

Copy of letter No. RS/SV. dated 12th November 1931, from Messrs. Volkart Brothers to the Secretary, East India Cotton Association.

It has been brought to our notice that press owners up-country have bought second hand hoops for baling cotton very freely this year. Pieces of such old hoops are usually riveted together to the required length and on some of the pieces the press mark of the original factory where they were first used will probably also be legible. We shall deem it a favour if you will ask you Committee to let us know what the attitude of the Association is in case such bales are tendered and rejection is claimed by buyers under the By-laws as being wrongly marked.

Copy of letter No. 500/73, dated the 3rd March 1931, from the Secretary, the Mill owners' Association, Bombay, to the Secretary, Indian Central Cotton Committee, Bombay.

SUBJECT :—*Non-marking of bales and malpractices.*

I have the honour to acknowledge the receipt of your letter No. 3273, dated the 3rd March 1931, on the above subject and to say that it will be laid before my Committee.

ONE REPLY RECEIVED.

Copy of letter No. 316-8495, dated the 10th April 1931, from the Superintendent-Messrs. E. D. Sassoon & Co., Ltd., Bombay, to the Secretary, Millowners' Associa, tion, Bombay.

With reference to your letter No. 559/73 of the 24th ultimo, we have to inform you that we purchased from Messrs. Valji Ladha & Co., 51 bales of Telhara Verum cotton which we found to be irregularly packed and about 37 candies of inferior cotton had been mixed.

We complained to the supplier who at once telegraphed for his constituent and we have received an apology from the original supplier in person.

As per Para No. 4 of the letter under reply we give the particulars called for :—

Press marks :— 36K30

Serial Numbers :— Nil.

Copy of letter dated the 7th April 1931, from the Secretary, Upper India Chamber of Commerce, Cawnpore, to the Secretary, Indian Central Cotton Committee, Bombay.

SUBJECT :—*Non-marking of bales and malpractices.*

With further reference to your letter No. 3277, dated the 3rd March 1931, in connection with the above, I beg to hand you herewith, for your information, extracts from letters so far received from the members of the Chamber interested in cotton.

Extract from letters from Members of the Chamber interested in cotton expressing views on non-marking of bales and malpractices.

Messrs. J. N. Cocolas & Co., Ltd. Cawnpore.	We have no cases of infringement to report.
The Swadeshi Cotton Mills, Co., Ltd., Cawnpore	We have not experienced any cases of non-marking of bales, but we do know that careless ginning and mixing is prevalent in the Punjab although we regret we are not in a position to quote concrete instances.
Messrs. Juggilal Kamlapat, Cawnpore.	We have gone through copy of the letter sent by you of the Indian Central Cotton Committee, Bombay. We are replying to each paragraph separately. 1. So far as we are receiving Indian cotton we also think the marks are regular. 2. We have not known any such infringements in our supplies. 3. The cottons we are receiving from the Punjab are very badly ginned and the cotton contains too much half and broken seeds in it, which please note.
The Elgin Mills Co., Ltd., Cawnpore.	We have not come across any cases where press marks have been omitted from cotton pressed in British India. We also have had no trouble in respect of mixing, watering, false packing or careless ginning of cotton supplied to us.

The British India Corporation, Ltd., Cawnpore.	We have referred this matter to our Cawnpore Cotton Mills Branch, who report that so far as they are aware, there are now comparatively few cases of irregularities in respect of the marking of cotton bales.
The Cawnpore Textiles, Ltd., Cawnpore.	We have to inform you that bales which have been pressed in British India are all marked with the Press Mark of the Ginning Factory from where they have come. We have not come across any cotton delivered to us which has been subject to any malpractices such as watering, etc.
The Muir Mills Co., Ltd., Cawnpore.	We have no complaints to make.
Messrs. Atherton West & Co., Ltd., Cawnpore.	We have examined ten bales received in our factory from the Punjab during the last two months. These bales are marked as follows:— 1 Bale —127P30] 1 ,, —121P30 } From Khanewal. 1 ,, —125P30] 1 ,, —Indistinct ,, ,, 1 ,, —No mark ,, ,, 5 bales received from Gojra bear no marks whatever on the hoops. From the above it would appear that the marking of bales as required by the Act is not going on as smoothly as the Central Cotton Committee would think.
Messrs. West's Patent Press Co., Ltd., Aligarh.	We would state that since we neither deal in cotton or are in charge of mills, the circular in question does not apply to us.
The New Victoria Mills, Co., Ltd., Cawnpore.	We have no irregularities to report.

Copy of letter No. 309/268/27, dated the 21st April 1931, from the Secretaries, Punjab Chamber of Commerce, Delhi, to the Secretary, Indian Central Cotton Committee.

Non-marking of bales and mal-practies.

We are directed to refer to your letter No. 3280 dated the 3rd March 1931 asking the Chamber for information as to any cases of irregularity in the marking of bales as required by the Cotton Ginning and Pressing Factories Act.

We have circularised our members who deal in cotton or are in charge of mills for information in this connection but they have no instances to give of the infringement of rules relating to marking of bales nor of other malpractices.

Copy of letter dated the 2nd April 1931, from the Assistant Secretary, Madras Chamber of Commerce, to the Secretary, Indian Central Cotton Committee.

Non-marking of bales and malpractices.

I thank you for your letter No. 3276, dated 3rd March 1931, and to state that none of the members of the Chamber are aware of any irregularities in regard to marking of bales and other malpractices.

Extracts from letter No. 5739, dated the 18th March 1931, from the Secretary, East India Cotton Association, Ltd., to the Secretary, Indian Central Cotton Committee.

SUBJECT:—*Non-Marking of bales and Malpractices.*

I have the honour to acknowledge the receipt of your letter No. 3274 of the 3rd March 1931 on the above subject and to enclose a *copy of arbitration award No. 134

* Not attached.

of 1929-30 under By-law 38, the contents of which will speak for themselves. In this case a penalty of Rs. 5 per candy was imposed upon the seller by the Board. I am to add that this was the last arbitration of its kind so far as concerns the marking of bales as required by the Indian Cotton Ginning and Pressing Factories Act.

* * * * *

Further, the members of my Association have been requested to co-operate with us in the matter by notifying to us any further instances of the infringements of the provisions of the Indian Cotton Ginning and Pressing Factories Act and/or the rules framed thereunder and also details of malpractices such as mixing, watering, false-packing or careless ginning, which may come to their notice. I am to assure you that any information that may be received from the members of my Association will be passed on to you for the information of your Committee with a view to enabling them to take necessary action in the matter.

APPENDIX XXXII.

SUBJECT 36.—*Baling of cotton with cotton material—Letter from the International Federation of Master Cotton Spinners' and Manufacturers' Associations.*

Secretary's Note.

The following letter and enclosure received from the International Federation of Master Cotton Spinners' & Manufacturers' Associations, Manchester, are given for the information of members.

Copy of letter dated the 24th November 1931, from the Assistant Secretary, International Federation of Master Cotton Spinners' and Manufacturers' Associations, to the Secretary, Indian Central Cotton Committee.

For your information I beg to enclose copy of a letter addressed to Mr. A. M. Hyde, Secretary of the Department of Agriculture, Washington, D. C., incorporating a resolution adopted by the International Cotton Committee at its meeting in Wiesbaden last month. It is stated that the difference in the cost of baling with this new cotton material is only 1/- per bale more than jute, but the advantages gained by the use of this form of baling more than counterbalance the additional cost. Savings are effected not only in freight but also in the spinning value of the cotton. The salvage value of the tare will, moreover, be considerably higher than that of jute tare.

I shall be obliged if you will kindly bring this correspondence to the notice of your board.

Copy of letter dated the 14th November 1931, from the General Secretary, International Federation of Master Cotton Spinners' and Manufacturers' Associations, Manchester, to Mr. A. M. Hyde, Secretary, Department of Agriculture, Washington, D.C.

At a recent meeting of the International Cotton Committee held in Wiesbaden, Germany, at which representatives of practically every cotton spinning nation were present, there were submitted samples of the cotton cloth baling originated by the United States Department of Agricultural Economics in co-operation with the Cotton Textile Institute of New York. From a spinner's point of view the use of this cotton baling material would be very beneficial in that no jute fibres would become intermixed with the cotton, which is ofttimes a serious cause of bad spinning. My Committee therefore respectfully but strongly urge that you will do all in your power to influence the use of this baling material by the ginneries in your country.

The following resolution was unanimously adopted, and has also been addressed to the Governments and those concerned in other cotton growing countries: —

"A satisfactory cotton baling material having been produced, this Committee strongly appeals to the Governments of the United States and Egypt to urge the adoption of this material for cotton baling in the future."

My Committee would be obliged if you would give your kind attention to this matter.

Bombay, Printed at the Examiner Press.

Abstract Proceedings

of the

Twenty-fifth Meeting of the Indian Central Cotton Committee, Bombay,

held on the

1st and 2nd August 1932

133644

INDIAN CENTRAL COTTON COMMITTEE.

25TH MEETING—AUGUST 1ST AND 2ND, 1932.

(Held at Vulcan House, Ballard Estate, Fort, Bombay.)

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Present :

Dewan Bahadur Sir T. Vijayaraghavacharya, K.B.E. (*President*), Vice-Chairman, Imperial Council of Agricultural Research.

Dr. W. McRae, I.A.S., Officiating Agricultural Expert, Imperial Council of Agricultural Research (*ex-officio*).

S. V. Ramamurty, Esq., I.C.S., Director of Agriculture, Representative of the Agricultural Department, Madras.

T. F. Main, Esq., O.B.E., I.A.S., Director of Agriculture, Representative of the Agricultural Department, Bombay Presidency.

P. B. Richards, Esq., I.A.S., Entomologist to Government, Representative of the Agricultural Department, United Provinces.

D. Milne, Esq., C.I.E., I.A.S., Director of Agriculture, Representative of the Agricultural Department, Punjab.

F. J. Plymen, Esq., C.I.E., I.A.S., Director of Agriculture, Representative of the Agricultural Department, Central Provinces.

Dr. D. B. Meek, O.B.E., Director-General of Commercial Intelligence and Statistics (*ex-officio*).

Sir Purshotamdas Thakurdas, Kt., C.I.E., M.B.E., Representative of the East India Cotton Association.

S. D. Saklatvala, Esq., Representative of the Bombay Millowners' Association.

Chunilal B. Mehta, Esq., Representative of the Indian Merchants' Chamber.

Seth Naranlal Jiwanlal, Representative of the Ahmedabad Millowners' Association.

J. Tinker, Esq., Representative of the Upper India Chamber of Commerce.

Y. G. Deshpande, Esq., Commercial representative, Central Provinces.

Rao Bahadur G. R. Kothare, Commercial representative, Central Provinces.

Khan Bahadur Sirdar Habibullah, M.L.C., Commercial representative, Punjab.

Nalini Ranjan Sirkar, Esq., Commercial representative, Bengal.

Sardar Sampuran Singh, Co-operative Banking representative.

M. R. Ry. V. C. Vellingiri Gounder, Avl., Representative of Cotton Growers, Madras.

M. R. Ry. K. Sarabha Reddi Garu, M.L.C., Representative of Cotton Growers, Madras.

Rao Bahadur Bhimbhai Ranchodji Naik, M.L.C., Representative of Cotton Growers, Bombay Presidency.

Rao Saheb C. S. Shirahatti, Representative of Cotton Growers, Bombay Presidency.

Mian Nurullah, M.L.C., Representative of Cotton Growers, Punjab.

Rao Bahadur M. G. Deshpande, Representative of Cotton Growers, Central Provinces and Berar.

M. P. Kolhe, Esq., M.L.C., Representative of Cotton Growers, Central Provinces and Berar.

B. A. Collins, Esq., C.I.E., I.C.S., Director-General and Secretary to Government, Department of Commerce and Industries, Representative of the Hyderabad State.

G. V. Sane, Esq., Director of Agriculture, Representative of the Baroda State.

H. H. Pandya, Esq., Agricultural Adviser, Representative of the Gwalior State.

F. K. Jackson, Esq., Director, Institute of Plant Industry, Indore, Representative of Rajputana and Central India States.

M. R. Ry. V. Ramanatha Ayyar, Avl., Cotton Specialist, Coimbatore.

Rai Saheb Ram Prasad Singh, Assistant Economic Botanist to Government, United Provinces, Cawnpore.

Mohammed Azhar Ali, Esq., M.L.A., Advocate, Lucknow.

Gulam Mohammad Khan, Esq., Representative of Sind Cotton Growers.

Lala Shri Ram, Representative of Cotton Millowners of Delhi.

The Officiating Secretary (P. H. Rama Reddi, Esq., I.A.S.).

The Director, Technological Laboratory (Dr. Nazir Ahmad).

By invitation.—

The Publicity Officer.

Roger Thomas, Esqr. (Empire Cotton Growing Corporation).

Letters and telegrams were received from the following members regretting their inability to attend the meeting :—

F. D. Odell, Esq., I.A.S., Deputy Director of Agriculture, Representative of the Agricultural Department, Burma.

J. Vonesch, Esq., Representative of the Tuticorin Chamber of Commerce.

Robert Lee, Esq., Commercial representative, Madras.

Khan Bahadur Maulvi Muhammad Obaidur Rahman Khan, M.L.C., Representative of Cotton Growers, United Provinces.

Major D. Vanrenen, Representative of Cotton Growers, Punjab.

Dr. L. C. Coleman, C.I.E., Director of Agriculture, Representative of the Mysore State.

C. R. Palairet, Esq., Member for Commerce and Industry, Holkar Durbar, Representative of the Holkar State.

Girdharlal B. Kotak, Esq., Representative of the Karachi Indian Merchants' Association.

Gentlemen,

It is my pleasant privilege to welcome you to this, the 25th, meeting of the Indian Central Cotton Committee. We have a long and interesting agenda before us chiefly concerning subjects relating to research schemes, but before discussing the business in front of us, I must refer to some of the changes which have taken place in the constitution of the body which are more numerous and perhaps more important than usual.

I am sure you will join with me in expressing our gratification that one of our members has been selected by the Government of India to fill one of the highest offices in the land. I refer to Choudhri Zafrullah Khan who has been appointed a member of the Viceroy's Executive Council. We have also to offer our congratulations to Rai Saheb Ram Prasad Singh who has been honoured since we last met with the title of Rai Sahib.

I desire to offer a special word of welcome to Mr. Ghulam Mohammad Khan and to Lala Shri Ram who represent our latest constituencies, namely, the cotton growers of Sind and the cotton millowners of Delhi respectively.

As is usual at the monsoon session there are several changes in the personnel of the Committee and I desire to extend a cordial welcome to the following new members :—

Mr. Nalini Ranjan Sarkar,
Khan Bahadur Maulvi Muhammad Obaidur Rahman Khan,
Mian Nurullah,
Rao Bahadur G. R. Kothare,
Mr. S. V. Ramamurty,
Mr. Robert Lee,
Khan Bahadur Sardar Habibullah.

Dr. McRae has temporarily taken the place of Mr. Burt. I must express our pleasure in seeing him once again in our midst.

Mr. J. H. Ritchie, our Secretary, has gone on six months' leave and Mr. P. H. Rama Reddi, Deputy Secretary, is officiating in his place. We have with us Mr. R. D. Mihra, who has been recently appointed as Publicity Officer on the Committee's staff. Mr. Mihra comes to us with high qualifications and we hope that through his work of publicity and propaganda the activities of the Indian Central Cotton Committee will soon be far more widely known than has been the case hitherto.

Our agenda, as I have already referred to, is a long one but it is of great interest. As for Research Schemes which form the most important part of our work, you will be called upon to consider the reports submitted by the Agricultural Research Sub-Committee and the Technological Research Sub-Committee whose preliminary deliberations have greatly simplified our work.

On the recommendation of this Committee the Madras Government undertook to introduce legislation prohibiting the growing of *Pulichai*

cotton in certain areas of the Madras Presidency. This Committee was consulted before the Madras Cotton Control Bill was placed before the Legislative Council and our suggestions have been accepted. The bill has since been passed and it now awaits the assent of the Governor General.

The Government of India have not acceded to the Committee's request "that the compilation and publication of the All-India Cotton Forecast may be entrusted to the Committee" for reasons explained in their letter which will be found among the papers before you. I am afraid that in this matter we and the Government of India are not able to see eye to eye but before I say anything further, I await your discussions in the meeting.

There is also on the agenda a report by the Standing Finance Sub-Committee on the accounts of the fumigation of American cotton for the year 1931-32, in which a recommendation has been made that a rebate of eleven annas per square bale and seven annas per round bale should be granted.

An important subject dealt with by the Cotton Ginning and Pressing Factories Sub-Committee was the question of licensing the ginning and pressing factories. The Sub-Committee, after a lengthy discussion, decided that the views of the trade associations represented on the Committee should be obtained. The views of the trade associations have since been received and the subject will be discussed further by the Local Sub-Committee whose report will be placed before the full Committee at its next meeting.

The Local Sub-Committee dealt with many important subjects since the last meeting of the full Committee and the results of their deliberations are before you.

On the subject of the importation of cotton seed from foreign countries, this Committee at its meeting held in July 1931 decided to request the Government of India to raise from 1 cwt. to 9 cwts. the maximum quantity that could be imported in one consignment but as you will see from the papers before you the Government of India have not accepted our recommendation.

One of the important subjects on our agenda is the investigation into the cost of growing cotton in India. It will be remembered that the Committee at its last meeting sanctioned a sum of Rs. 10,000 for the initial expenses of an investigation into the cost of production of cotton and its rotation crops during the current financial year, and also decided that the question of the appointment of a small Sub-Committee should be left to the Standing Finance Sub-Committee. This Sub-Committee, called the Joint Sub-Committee of the Imperial Council of Agricultural Research and the Indian Central Cotton Committee, has since been constituted. The Chief Economist in connection with this investigation has very recently been appointed and the first meeting of the Joint Sub-Committee will be held in the course of this month.

We shall be considering presently the proceedings of three of the Provincial Cotton Committees which show that the Provincial Committees are capable of doing excellent work. The Sind Cotton Committee has made a recommendation that the Committee should hold one of its half-yearly meetings in Sind in the near future and in view of our present policy of publicity and propaganda we would welcome the views of the members present on the subject.

Another important subject on the agenda is the Tariff Board Enquiry into the Cotton Textile Industry. The Special Sub-Committee which was appointed to prepare a draft reply to the letter received from the Tariff Board in connection with their enquiry into the Cotton Textile Industry has since drafted a reply but in view of the importance of the subject the Sub-Committee felt it necessary to send every one of you a copy of the draft reply for any comments that you might wish to make on its contents. The Tariff Board also has been supplied with a copy but it has been informed that the views expressed in the reply were only of nine members of the Committee and any fundamental differences of opinion received from other members would be communicated on receipt. Some of the members have sent in their opinions which will be found among the papers before you and I am sure that this subject will receive the careful consideration of the Committee.

At this meeting we shall have to decide the policy which the Committee wishes to be followed at the Institute of Plant Industry, Indore. The Director of the Institute has sent in his proposals which you will be called upon to discuss and I have no doubt that they will receive your special attention.

It will be remembered that this Committee at its last meeting appointed a Special Sub-Committee to negotiate with the United Provinces Government on the question of a grant to the Pink Boll-Worm Extension Scheme and to report to you the results of their negotiations at this meeting. The papers circulated to you contain the report of the Sub-Committee and further correspondence thereon. As you will see, the United Provinces Government does not consider the present moment opportune for carrying the scheme into execution.

Gentlemen, I shall no longer detain you from your labours.

SUBJECT 2.—*Confirmation of Minutes.*

The Minutes of the 24th meeting were taken as read, confirmed and signed by the President.

SUBJECT 3.—*Comments of the Government of India on the Annual Report of the Committee.*

The comments* of the Government of India on the Annual Report of the Committee were recorded.

*Appendix I (page 31).

SUBJECT 4.—*Changes in the personnel of the Committee and Sub-Committees.*

The Secretary's note* was recorded.

SUBJECT 5.—*Cotton Ginning and Pressing Factories Act—Progress made in Indian States.*

The Secretary's note† was recorded.

SUBJECT 6.—*Summary of Proceedings of the Cotton Ginning and Pressing Factories Sub-Committee.*

The Secretary's note‡ was recorded.

SUBJECT 7.—*Cotton Marketing—Attempts§ made to organise regulated cotton markets under the Bombay Cotton Markets Act.*

Sir Purshotamdas Thakurdas proposed the following resolution which was seconded by *Mr. Main* and passed unanimously :—

RESOLUTION 1.—"The Indian Central Cotton Committee thanks the Bombay Government for acceding to its request by sending copies of the first report on the working of the Dhulia Cotton Market to all District Local Boards and Municipalities. The results already achieved are encouraging and the Committee trusts that the spread of the knowledge of the benefits of regulated markets will lead to the establishment of a larger number of such markets in the near future."

SUBJECT 8.—*Cotton Marketing—Revised Indore Cotton Market Rules*‖.

Rao Bahadur M. G. Deshpande proposed the following resolution which was seconded by *Mr. M. P. Kolhe* and passed unanimously :—

RESOLUTION 2.—"The Indian Central Cotton Committee wishes to express its appreciation of the interest shown by the Indore Darbar in connection with the regulation of cotton markets in the State and trusts that its efforts in this direction will have the desired effect of securing better prices to the grower of cotton."

SUBJECT 9.—*Cotton Marketing—Universal Standards for Indian cottons.*

Summary of discussion.

Sir Purshotamdas Thakurdas said that when the subject was considered at the July 1930 meeting, it was suggested that the Committee should seek the assistance and co-operation of the Imperial Council of Agricultural Research and if that suggestion had been accepted the next move should be to ascertain which of the Commercial bodies should have a hand in the matter of preparing the standards. He emphasized the necessity of one controlling neutral body to watch the interests of

* Appendix II (page 31).
† Appendix III (page 32).
‡ Appendix IV (page 32).
§ Appendix V (page 33).
‖ Appendix VI (page 33).

all concerned and suggested that the subject might be brought up at the next meeting after the President had ascertained the views of the Government of India and the commercial bodies. *Mr. Chunilal B. Mehta* agreed with Sir Purshotamdas Thakurdas, but wanted to have a resolution passed accepting the need for universal standards so that the Government of India might know that this Committee was earnest about these standards. *Mr. Y. G. Deshpande* thought it necessary that the opinion of the growers also should be invited. The following resolution was passed unanimously :—

RESOLUTION 3.—"That a copy of the previous discussion on this subject be circulated to all commercial and agricultural bodies interested in cotton and to the Government of India and that the matter should be brought up at the next meeting of the Committee for further discussion and final decision."

SUBJECT 10.—*Madras Cotton Control Bill**.

The following resolution, moved by *Khan Bahadur Sirdar Habibullah* and seconded by *Mr. V. C. Vellingiri Gounder* was passed unanimously :—

RESOLUTION 4.—"The Indian Central Cotton Committee thanks the Madras Government for the opportunity afforded to it of expressing its views on the Madras Cotton Control Bill and for giving effect to its recommendations by incorporating the necessary amendments in the Bill."

SUBJECT 11.—*Cotton Statistics—Proposed compilation† and publication of cotton forecasts by the Committee—Reply from the Government of India.*

Mr. Chunilal B. Mehta referred to paragraph 3 of the Government of India's letter on the subject and said that variation in stocks and the extra factory consumption which was generally taken at 750,000 bales per year had nothing to do with the forecast of the growing crop. The carry-over of cotton from one season to the next in the interior parts of India was an unknown factor and it was necessary to have this factor also correctly estimated but the most important thing was the improvement of crop forecast.

Dr. Meek endorsed the above and said that carry-over and extra factory consumption were only utilised for the verification of the forecast figures.

Mr. Roger Thomas drew attention to the inaccuracy of the Indian forecasts during the last few years and compared them unfavourably with the high standard of accuracy of the American forecasts. Owing to the great importance of these forecasts to the trade and growers alike, he suggested that a suitable man should be engaged to study the system of forecasting in all its details both in India and in America to enable the Committee to put forth suggestions before the present collecting agency with a view to effecting improvements in the existing system.

* Appendix VII (page 35). † Appendix VIII (page 37).

Dr. Meek said that the methods followed in America were fully known to the Statistical Department in India and that the difficulties in India in securing figures for forecast purposes were known to several members of the Committee present and in some respects they were entirely different from the difficulties which arise in America. He did not consider that any useful purpose would be served by the Committee sending some one to America for training, but that, if the Committee had the necessary funds, he stated that there would be no great harm done in training a few more Statisticians for India.

Mr. Plymen pointed out that the high standard of accuracy obtained in America was due to the high cost of the specialised agencies employed in America for this purpose which was not feasible in India at present.

Mr. Azhar Ali thought that the Government's refusal to assign this task to the Committee was due to their resenting the objectionable form of the resolution passed by the Committee.

Mr. Main instanced the case in which the Secretary, Indian Central Cotton Committee, was assisting the Bombay Department of Agriculture in making the cotton statistics as complete as possible through approaching the various Indian States to send in their returns. It, therefore, seemed to him that the Secretary, Indian Central Cotton Committee, was in a good position to undertake statistical work, because of his contact with all the cotton growing provinces and States.

Mr. Chunilal B. Mehta drew attention to the unique position the Secretary, Indian Central Cotton Committee, held in knowing Indian cotton in all its aspects as compared with the Director-General of Commercial Intelligence and Statistics in that he had the entire resources of the Committee at his back. The Committee would be prepared to spend more money than the Government and if a resolution to this effect was passed it might commend itself to the Government.

Mr. Collins while supporting the views expressed by Mr. Mehta further stressed the advantages of Bombay as being the best centre for collection of statistics. The Directors of Agriculture who were responsible for the collection of statistics met twice a year in Bombay as members of the Committee and it was easy for them to discuss and analyse, in consultation with the representatives of traders and growers, all questions arising from statistics. The Secretary might not be a statistical expert but it was easy to have on his staff a man with statistical training. He therefore suggested the Director-General of Commercial Intelligence and Statistics might give the necessary training in statistical work to a member of the Secretary's staff and take steps to transfer the cotton statistics to the Committee. He thought the Committee was in the best position to see that use was made of information in the possession of the trade in compiling the forecasts.

Mr. Roger Thomas ascribed the accuracy of the American forecasts to the large number of checks exercised over the information obtained from various parts. He asked Dr. Meek what were the checks utilised by him in estimating cotton forecasts.

Mr. Plymen thought that under the existing arrangements in India the Director-General of Commercial Intelligence and Statistics had to depend largely upon the reports as submitted by the provincial Governments without any reliable check. The Committee might be able to improve on the Government forecasts by tackling the problem at the source, viz., the primary reporting agencies in the villages.

Mr. Richards instanced a case in which last year a primary reporting agent had put down the yield in a certain area to 7 maunds per acre whereas actually it was 14 maunds.

Sir Purshotamdas Thakurdas referring to the resolution moved by Mr. Mehta in the previous debate said that it only aimed at securing to the Indian Central Cotton Committee a little more say in compiling and publishing the All-India forecasts with a view to ensuring greater accuracy than hitherto. He thought that the Indian Central Cotton Committee would be as handicapped as the Commercial Intelligence and Statistics Department in regard to the defects in the primary report. All that was aimed at was to devise some means which could meet the point of view raised by Messrs. Main and Mehta in regard to getting more statistics from the Kathiawar States and obtaining separately for Kathiawar and Gujerat returns of rail-borne traffic so that figures for cotton pressed and the rail-borne traffic returns should be such as could be compared. He stressed the necessity of keeping the discussion well within its limits as no useful purpose could be served by enlarging the field beyond what it was when the question was originally raised.

Mr. Tinker asked what the forecast of the cotton crop meant. The cotton he said might be in the fields growing or in bales ready for export and what exactly the trade required was the anticipated crop of the country. The trade in Bombay got much more information than the Government and he therefore suggested the formation of a forecasting sub-committee the members of which could collect all information about the anticipated crop by telegram in the same way as private traders in Bombay did at present.

Mr. Saklatvala thought the suggestion might lead to confusion especially in the event of the Government and private reports being conflicting. It must be either the Government or this Committee and he thought the Committee was in a better position to gather reliable data by employing special officers in the districts who would be in a far better position than the existing machinery of the Government to gather accurate information.

Dr. Meek stated that he was rather under the impression that it had already been arranged to separate the Kathiawar States from the Gujerat trade block for the purpose of compiling raw cotton trade statistics. He said that he wished to bring out two principal points which had occurred to him as a result of the discussion. The first was that there seemed to be considerable confusion in thought between the two problems, (1) the work of preparing the forecasts of the cotton crop and (2) that of what

had been called "post-mortem" examinations of such forecasts. He pointed out the distinction between the two and indicated that, in his opinion, the Indian Central Cotton Committee could do some very useful work regarding the "post-mortem" examination of previous forecasts, and that, in time, this work would be very helpful to local officers in finding whether their forecasts had gone wrong, where the error had arisen and how it could be avoided in future forecasts. The second point he made was that in such a matter as a forecast for the cotton crop it would be difficult to entrust the work to the Committee as a whole, for reasons which were so obvious that they need not be specified. The proposal to transfer the cotton forecast work to the Indian Central Cotton Committee, therefore, reduced itself to the transfer of this work to the Secretary of the Indian Central Cotton Committee and his staff. *Dr. Meek* indicated that he could find no directions in which the Indian Central Cotton Committee's secretariat would be better placed than the Department of Statistics or have superior information. He showed that there would be definite objections to the use of trade figures to modify forecast figures supplied by local officers and, from his experience, he refused to accept the statement which had been made that the trade were in possession of figures superior to those available to local officers of the Government.

In discussing the proposal before the Committee it had been generally assumed that the transfer of the forecast work to the Committee would result in an improvement in cotton forecasts, but no definite suggestions had been put forward as to how this improvement was to be effected, apart from the proposal that traders in cotton could give better figures than the local officers. He indicated that he would welcome any suggestions from the Indian Central Cotton Committee as to methods whereby the forecasts could be improved and that such suggestions would receive the most careful consideration.

Mr. Chunilal B. Mehta pointed out the unwillingness of the Government of India to provide more money and to adopt whatever suggestions were put forward by the Indian Central Cotton Committee to effect improvement in the forecasts. During the last ten years the difference between the crop forecast and the actual crop had varied from a million to two million bales per year. This made it difficult for the Indian Central Cotton Committee to suggest any means for improving the accurate compilation of statistics and other relevant information. He agreed with Mr. Collins on the suitability of Bombay being the proper place for the compilation of forecasts. The Director-General of Commercial Intelligence and Statistics at present had to devote his attention to forecasts of all crops including statistics of cotton which was the most important commodity in India, and naturally he could not pay special attention to cotton. He therefore proposed that cotton statistics might be entrusted to the Committee and thought that the Committee's resolution of last year might be kept up and the Government of India explained the reason for their so doing.

Mr. Milne explained that forecast figures in the Punjab were fixed by the Director of Agriculture from independent estimates made by the

staff of the Agricultural and Revenue Departments. These forecasts were compared with the cotton ginning factory returns of bales pressed and the rail-borne trade statistics. He appreciated the Indian Central Cotton Committee's assistance in checking the pressing forecasts. The Director-General of Commercial Intelligence had a staff to deal with the compilation of statistics and he considered it unnecessary and wasteful to duplicate that staff in Bombay. His suggestion was to leave the compilation and publication of crop statistics in the hands of the Director-General of Commercial Intelligence, but to form a Special Sub-Committee of the Indian Central Cotton Committee for "post-mortem" examination of cotton forecasts which would include the Director-General of Commercial Intelligence, Directors of Agriculture and members of the trade. This he felt would bring all the knowledge of the Indian Central Cotton Committee on to the subject with no extra expense to Government.

The President asked if Mr. Milne wanted to propose a resolution on this subject or simply wanted a copy of this debate sent to the Government of India. He did not think the Government of India would change their mind.

Mr. Milne thought it would be sufficient to send a copy of the debate to the Government of India.

Mr. Tinker thought the Committee should insist on their previous resolution.

The President said that if they wanted to return to the charge the best way would be to appoint a small sub-committee or ask the Local Sub-Committee to draft a reasoned memorandum meeting all the points raised by Dr. Meek, and place it before the members at the next meeting before despatching it to the Government of India.

Mr. Plymen said that as the "post-mortem" system had been in vogue for a few years they could very well ask why the forecasts were inaccurate, and why the actual trade returns differed from the forecasts. The answer was that the forecasts were prepared from insufficient and unsatisfactory data. He enquired if the accuracy of the forecasts had improved to any extent since the "post-mortem" examination had been undertaken.

Dr. Meek thought that the figures taken by the trade for the total crop production were greatly influenced by the two items of unknown magnitude—the extra factory consumption and the stock carry-over. He suggested that one direction in which the Indian Central Cotton Committee could assist would be to investigate the question of extra factory consumption and to obtain perhaps a more accurate estimate of this quantity. He also pointed out that many of the trade estimates of total production did not take into account the question of carry-over in up-country stocks. By obtaining the figures of upcountry stocks at the end of the year, the Indian Central Cotton Committee could give valuable assistance. He stated that he had already made the suggestion to the Secretary, Mr. Ritchie, that a Sub-Committee of the Indian Central

Cotton Committee might be set up to tackle what had been termed the "post-mortem" examination of the cotton forecasts and that he would be very willing to join such a Sub-Committee and assist as far as possible.

Mr. Roger Thomas emphasized that every up-country factory owner made a fairly shrewd estimate of the crop which was harvested in their districts. He did not see why their information could not be used as a check by the Government of India. He felt that the majority of them would be only too willing to give any information in their possession.

The President repeated his previous views as to the putting forth of a reasoned memorandum by the Local Sub-Committee and asked if this would meet the wishes of the members.

Sir Purshotamdas Thakurdas suggested the desirability of eliciting the views of members for the consideration of the Local Sub-Committee which should avail themselves of Dr. Meek's offer of assistance in the "post-mortem" examination of figures.

The President agreed with Sir Purshotamdas Thakurdas' suggestion and asked the members to send their views before the end of September to the Secretary who would place the whole matter before the Local Sub-Committee at its next meeting.

Mr. Richards suggested that the Secretary might send a summary of the debate to members for their information.

The President proposed the following resolution which was seconded by *Mr. Richards* and carried unanimously :—

RESOLUTION 5.—"That before this memorandum was compiled, the Local Sub-Committee should invite all the members to send an expression of their views with their reasons therefor and the Secretary, who would then finally collect all the information, should put them before the Local Sub-Committee."

SUBJECT 12.—*Cotton Statistics—Raw Cotton Trade Statistics.*

The Secretary's note* was considered. The following resolution proposed by the *President* and seconded by *Mr. S. D. Saklatvala* was passed unanimously :—

RESOLUTION 6.—"That the Government of India be requested to arrange for separate trade statistics for loose cotton for such trade blocks as, in the opinion of the provincial authorities responsible for the compilation of cotton forecasts, are of importance for their purposes."

SUBJECT 13.—*Report† of the Standing Finance Sub-Committee on the fumigation of American cotton—Accounts for 1931-32.*

The President moved the following resolution which was seconded by *Mr. D. Milne* and passed unanimously :—

RESOLUTION 18.—"That the Report of the Standing Finance Sub-Committee on the fumigation accounts for the year 1931-32 be adopted."

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* Appendix IX (page 38). † Appendix X (page 39).

SUBJECT 14.—*Summary of Proceedings of the Local Sub-Committee.*

The Secretary's note* was recorded.

SUBJECT 15.—*Technological Research—Progress Report† of the Director, Technological Laboratory.*

SUBJECT 16.—*Technological Research—Report‡ of the Technological Research Sub-Committee.*

Summary of discussion.

Mr. Milne expressed satisfaction at the results of the various tests carried out at the Technological Laboratory during the seven months covered by the report and congratulated the Director, Technological Laboratory, on the recognition which the Laboratory had won outside India. *Mr. Ramanatha Ayyar* suggested that in the case of combing experiments it was desirable that the Provinces concerned should be kept informed so that tests might be given up on the strains which had been discarded and the new strains which had taken their place might be experimented upon. *Dr. Nazir Ahmad* agreed to the proposal.

The following resolutions were unanimously carried :—

RESOLUTION 20.—"That the Progress Report of the Director, Technological Laboratory, be approved."

RESOLUTION 21.—"That the Report of the Technological Research Sub-Committee be adopted."

SUBJECT 17.—*Report§ of the Standing Finance Sub-Committee.*

(*a*) Balance Sheet as at 31st March 1932.

(*b*) Final Accounts, 1931-32.

(*c*) Revised Estimates, 1932-33.

(*d*) Budget for 1933-34 (Government Servants).

Sir Purshotamdas Thakurdas moved and *Rao Bahadur Bhimbhai Ranchodji Naik* seconded the following resolution which was carried unanimously :—

RESOLUTION 7.—"That the Report of the Standing Finance Sub-Committee be adopted.

That the Revised Estimates for 1932-33, as now amended, be adopted.

That the Budget for the pay of Government officers for 1933-34 be approved."

SUBJECT 18.—*Agricultural Research—General Progress Report.*

The General Progress Report‖ was adopted.

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* Appendix XI (page 39). † Appendix XII (page 41).
‡ Appendix XIII (page 48). § Appendix XIV (page 49).
‖ Appendix XV (page 76).

The President said that in view of the pressure of work due to the increase in the number of research schemes during the past few years and also to the importance of the research schemes over which lakhs of rupees had been spent it would be advisable to split the Agricultural Research Sub-Committee into three or four small sub-committees each of which would carefully scrutinise a group of subjects before they came up before the full Agricultural Research Sub-Committee for final consideration.

This proposal was approved.

SUBJECT 19.—*Progress Report on Surat Physiological Research Scheme.*

The Progress Report* was approved.

SUBJECT 20.—*Progress Report on Surat Boll-worm-Propaganda-Scheme.*

The Progress Report* was approved.

SUBJECT 21.—*Final Report on Dharwar Cotton Wilt Research Scheme.*

The Final Report* was approved.

SUBJECT 22.—*Final Report on Khandesh Cotton Breeding Scheme.*

The Final Report* was approved.

SUBJECT 23.—*Final Report on Sind Physiological Research Scheme.*

The Final Report* was approved.

SUBJECT 24.—*Progress Report on Madras Herbaceum Research Scheme.*

The Progress Report* was approved.

SUBJECT 25.—*Progress Report on Madras Pempheres and Physiological Research Scheme.*

The Progress Report* was approved.

SUBJECT 26.—*Progress Report on Madras Fodder Cholam Scheme.*

The Progress Report* was approved.

SUBJECT 27.—*Progress Report on the Punjab Botanical Research Scheme.*

The Progress Report* was approved.

SUBJECT 28.—*Progress Report on the Punjab Entomological Research Scheme.*

The Progress Report* was approved.

SUBJECT 29.—*Progress Report on the Punjab Cotton White Fly Scheme.*

The Progress Report* was approved.

* Not printed.

SUBJECT 30.—*Progress Report on the Central Provinces Botanical Research Scheme.*

The Progress Report* was approved.

SUBJECT 31.—*Annual Report of the Institute of Plant Industry, Indore.*

The Annual Report* was approved.

SUBJECT 32.—*Progress Report on Burma Cotton Improvement Scheme.*

Sir Purshotamdas Thakurdas commented whether in view of the fact that the Director of Agriculture, Burma, had never attended the meetings of the Committee to exchange views, time had not arrived when his attention may be drawn to this. His absence meant the ignorance of the Committee of what was being done in Burma with the money which had been voted as none else here knew anything about cotton developments in Burma.

The President said he would communicate to the Director of Agriculture, Burma, the desire of the Committee that he should attend the meetings of the Committee.

The Progress Report* was approved.

SUBJECT 33.—*Progress Report on Hyderabad Botanical Research Scheme.*

The Progress Report* was approved.

SUBJECT 34.—*Progress Report on Hyderabad Cotton Survey Scheme.*

The Progress Report* was approved.

SUBJECT 35.—*Progress Report on Bikaner Gang Canal Scheme.*

The Progress Report* was approved.

SUBJECT 36.—*Progress Report on Baroda Root Rot Scheme.*

The Progress Report* was approved.

SUBJECT 37.—*Seed Distribution and Extension Schemes—Progress Report on Hubli Scheme.*

The President said that the Agricultural Research Sub-Committee felt that in view of the increasing number of applications for seed distribution that were received a definite policy should be laid down and that a small Sub-Committee should be entrusted with this work.

The President's proposal was agreed to.

The Progress Report* on the Hubli Seed Distribution and Extension Scheme was approved.

* Not printed.

SUBJECT 38.—*Seed Distribution and Extension Schemes—Progress Report on Gadag (Extension) and Gadag (Supplementary) Schemes.*

The Progress Report* was approved.

SUBJECT 39.—*Seed Distribution and Extension Schemes—Progress Report on Khandesh (Banilla) Scheme.*

The Progress Report* was approved.

SUBJECT 40.—*Seed Distribution and Extension Schemes—Progress Report on Surat Scheme.*

The Progress Report* was approved.

SUBJECT 41.—*Seed Distribution and Extension Schemes—Progress Report on Sind Scheme.*

The Progress Report* was approved.

SUBJECT 42.—*Seed Distribution and Extension Schemes—Progress Report on Madras Scheme.*

The Progress Report* was approved.

SUBJECT 43.—*Seed Distribution and Extension Schemes—Progress Report on Hyderabad Scheme.*

The Progress Report* was approved.

SUBJECT 44.—*Seed Distribution and Extension Schemes—Progress Report on Central Provinces Scheme.*

The Progress Report* was approved.

SUBJECT 45.—*Seed Distribution and Extension Schemes—Report on the Scheme for the erection of ginnery at Lyallpur.*

The Report* was approved.

SUBJECT 46.—*Report† of the Agricultural Research Sub-Committee.*

A. *Report of the Agricultural Research Sub-Committee on Progress Reports and General Items.*

Summary of discussion.

There was some discussion on the subject of prize schemes for clean-picking and improved varieties of cotton—item No. 26 of the Report. Several members were doubtful of the utility of these schemes as in their opinion the benefit of clean-picked cotton would go to the middlemen and not to the grower and the latter required no inducement to accept new varieties. Some were of opinion that clean picking was not an economic proposition and the rest were inclined to give a trial to the scheme.

* Not printed. † Appendix XVI (page 77).

The scheme was finally rejected.

The President proposed and *Rao Bahadur Bhimbhai R. Naik* seconded the following resolution which was carried unanimously :—

RESOLUTION 8.—"That the Report of the Agricultural Research Sub-Committee on items 31 and 26 to 30 and 33 and 34 and on progress reports be approved."

The President proposed and *Mr. Chunilal B. Mehta* seconded the following resolution which was passed unanimously :—

RESOLUTION 9.—"That the Selection Sub-Committee for the appointment of Cotton Botanists for Bombay and the Punjab consist of :—

The President,

Sir Purshotamdas Thakurdas,

Dr. W. McRae,

Mr. T. F. Main, and

Mr. S. D. Saklatvala ;

and that the Standing Finance Sub-Committee be authorised to consider the report of the Selection Sub-Committee and make the appointments."

B. *Report of the Agricultural Research Sub-Committee on new schemes and additional grants for schemes sanctioned.*

Summary of discussion.

Mr. Plymen's explanation on the necessity of continuing the Seed Extension Scheme in the Central Provinces was accepted and the scheme as submitted by him was extended for a period of one year at a total cost of Rs. 26,316-8-0.

The President proposed the following resolution which was seconded by *Mr. Y. G. Deshpande* and passed unanimously :—

RESOLUTION 10.—"That the Report of the Agricultural Research Sub-Committee on new schemes be adopted subject to the amendment on item 7 (iii) as already passed."

C. *Report of the Agricultural Research Sub-Committee on Research Students.*

The President proposed and *Mr. T. F. Main* seconded the following resolution which was passed unanimously :—

RESOLUTION 11.—"That the Report of the Agricultural Research Sub-Committee on Research Students be adopted."

SUBJECT 47.—*Importation of foreign cotton seed—Letter from the Government of India.*

The subject was discussed at some length. It was finally decided by a majority that the Committee should not approach the Government of

India to raise the present limit of the importation of foreign cotton seed, viz. 1 cwt.

SUBJECT 48.—*Investigation into the cost of growing cotton in India.*

A complaint was raised by one of the members that sufficient number of growers was not appointed on the Joint Sub-Committee though the scheme concerned them more than any others.

The President proposed the following resolution which was seconded by *Mr. M. P. Kolhe* and carried unanimously :—

RESOLUTION 12.—"That the Secretary's note* be recorded subject to the Standing Finance Sub-Committee being empowered to co-opt members."

SUBJECT 49.—*Institute of Plant Industry, Indore—Report† of policy to be followed.*

The speakers on this subject stressed the need for carrying out a programme in proportion to the amounts contributed by the States and the Indian Central Cotton Committee and undertaking the investigation of fundamental problems. *Mr. Collins* suggested that in paragraph (*d*) of the General Programme an addition, viz., "by rotation" should be made after the words "can be improved" in the last line but one of the first sub-paragraph, as it was necessary to make it quite clear while laying down the programme.

The President proposed and *Mr. S. D. Saklatvala* seconded the following resolution which was passed unanimously :—

RESOLUTION 13.—"That the Indian Central Cotton Committee approves of the future policy and programme of research work of the Institute of Plant Industry, Indore, as laid down in the Report submitted by the Director, subject to the amendment proposed by Mr. Collins."

SUBJECT 50.—*Representation‡ of the Indian Central Cotton Committee on the Advisory Board of the Imperial Council of Agricultural Research.*

The President moved the following resolution which was seconded by *Sir Purshotamdas Thakurdas* and carried unanimously :—

RESOLUTION 14.—"That the Indian Central Cotton Committee approves the action of the Standing Finance Sub-Committee in appointing Rao Bahadur Bhimbhai Ranchodji Naik on the Advisory Board of the Imperial Council of Agricultural Research *vice* **Mr. S. D. Saklatvala resigned."**

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* Appendix XVII (page 82). † Appendix XVIII (page 82).

‡ Appendix XIX (page 88).

SUBJECT 51.—*Provincial Cotton Committees—Abolition of United Provinces Provincial Cotton Committee—Letter from the United Provinces Government.*

The Secretary's note* was recorded.

SUBJECT 52.—*Provincial Cotton Committees—Abolition of Burma Provincial Cotton Committee.*

The Secretary's note† was recorded.

SUBJECT 53.—*Provincial Cotton Committees—Proceedings‡ of the Central Provinces Provincial Cotton Committee.*

SUBJECT 54.—*Provincial Cotton Committees—Proceedings§ of the Sind Cotton Committee.*

SUBJECT 55.—*Provincial Cotton Committees—Proceedings‖ of the Punjab Provincial Cotton Committee.*

The President proposed and *Mr. T. F. Main* seconded the following resolution which was passed unanimously :—

RESOLUTION 15.—"The Indian Central Cotton Committee has read with great interest the proceedings of the Central Provinces, Sind and Punjab Cotton Committees and trusts that the good work that is being done by these bodies will be of permanent value to the cotton industry of the provinces concerned."

The Director of Agriculture, Punjab, was asked to put up definite proposals for financial help to the Co-operative Sale Societies in the Punjab.

SUBJECT 56.—*Provincial Cotton Committees.—Co-operation¶ between the Indian Central Cotton Committee and Provincial Cotton Committees.*

One of the members drew attention to the advisability of members of the Central Cotton Committee being members of their Provincial Cotton Committees also. The suggestion was approved and it was agreed to recommend the proposal to the Provincial Governments.

SUBJECT 57.—*Meeting of the Committee at Indore—Proposed** postponement of—*

The President proposed the following resolution which was seconded by *Mr. Chunilal B. Mehta* and passed unanimously :—

RESOLUTION 17.—"That the question of holding a meeting of the Indian Central Cotton Committee at Indore be postponed for consideration at the next meeting of the Committee."

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* Appendix XX (page 89).
† Appendix XXI (page 89).
‡ Appendix XXII (page 90).
§ Appendix XXIII (page 93).
‖ Appendix XXIV (page 96).
¶ Appendix XXV (page 105).
** Appendix XXVI (page 107).

SUBJECT 58.—*Proposal* to hold a meeting of the Committee in Sind.*

The following resolution was passed by a large majority :—

RESOLUTION 16.—"That the next cold weather meeting of the Committee be held in Sind."

SUBJECT 59.—*United Provinces Pink Boll-worm Extension Scheme—Report of deputation to Cawnpore and Lucknow.*

The Secretary's note† was recorded.

SUBJECT 60.—*Tariff‡ Board Enquiry into the Cotton Textile Industry.*

The reply submitted by the Special Sub-Committee to the Tariff Board was approved.

SUBJECT 61—*Gadag and Hubli Co-operative Cotton Sale Societies—Audit of accounts for the year 1931.*

Rao Saheb C. S. Shirahatti having offered no objection, it was decided that the accounts of the two Societies pertaining to the Seed Extension Schemes should be audited by the Committee's auditors.

SUBJECT 62 (*a*)—*Cotton Contracts Bill§—Reference from Bombay Government.*

Summary of discussion.

A long discussion took place on the subject of Cotton Contracts Bill. Several members took strong objection to clause 9 of the bill as in their opinion it gave excessive powers to the Government to appoint a Board of Control in lieu of the Board of Directors.

Sir Purshotamdas Thakurdas on being requested gave in a lengthy speech a detailed account of the events which led to the formation of the East India Cotton Association, the appointment of the Wiles Committee and the introduction of the bill based on the report of the Wiles Committee into the Legislative Council which was lost by a small majority, in the previous year. He then dwelt on the political situation in the country which had brought the present bill into being but exonerated the East India Cotton Association from all blame. He regretted that the cotton trade should have been made the battlefield of the contending forces of the Congress and the Government and thought that this bill which was intended to bring pressure to bear on the trade was likely to defeat its own object.

A number of speakers including *Mr. S. D. Saklatvala* agreed with the main points of Sir Purshotamdas Thakurdas' objections against the bill

* Appendix XXVII (page 107). † Appendix XXVIII (page 107).
‡ Appendix XXIX (page 108). § Appendix XXX (page 114).

and were strongly in favour of the trade being left alone to find its own solution of the present difficulties. The representatives of the growers, while being in favour of one association only if it were to be of a democratic nature, were, however, anxious for a wider representation of their interest on the Board of Directors.

The President then put clauses 4 (1) and 4 (2) of the bill to vote and asked the Committee to pronounce their opinion whether any bill of the kind under discussion was necessary and if so whether the Government should be given option to recognise more than one association. The majority voted in favour of the bill being required. They also were in favour of one association only. On the question of whether Government should have the option of recognising more than one association under abnormal conditions the majority voted in favour of the Government having the option. The clauses 9 and 10 relating to the supersession of the Board of Directors by a Board of Control were next considered and after several speakers, including the growers' representatives, had expressed their views, voting was taken which resulted in the rejection of the two clauses.

SUBJECT 62 (*b*).—*Appointment of Cotton Growers' representatives on the Board of Directors of the East India Cotton Association.*

The President proposed and *Seth Naranlal Jiwanlal* seconded the following resolution which was carried unanimously :—

RESOLUTION 19.—"That Rao Bahadur Bhimbhai Ranchodji Naik and Mr. M. P. Kolhe be appointed to represent the growers' interests on the Board of the East India Cotton Association."

SUBJECT 63.—*Employment of ex-servants of the Committee working in provincial schemes—Representation of Mr. S. V. Godbole, B.Ag., M.Sc., late Senior Assistant in the Surat Physiological Scheme.*

It was decided that the consideration of Mr. Godbole's representation should be put off till the general policy of employment of ex-servants of the Committee was settled.

SUBJECT 64.—*Publicity and Propaganda—Scheme* prepared by Publicity Officer.*

The Committee agreed to carry on publicity and propaganda by the following methods recommended by the Publicity Officer in his memorandum :—

The Press—Both English and Vernacular papers to be sedulously nursed. A constant flow of material to the Press to be kept up and Editors cultivated so that the columns of newspapers will be open for its reception.

*Appendix XXXI (page 117).

Illustrated pamphlets for the dissemination of knowledge of cotton and bulletins describing summary schemes of the Committee to be issued periodically.

Leaflets, posters and exhibits also to be utilised to the utmost extent for propagating the Committee's schemes and the qualities of Indian cotton.

Exhibits to be displayed at agricultural shows, melas, railway stations and other suitable places wherever opportunity offers.

Cotton Tournaments in the districts with improved variety to be organised in co-operation with Provincial Agricultural Departments.

The budget amounting to Rs. 19,000 for the pay of the Publicity Officer and his staff, travelling allowance and contingencies was sanctioned by the Committee.

The President thanked the members for their extreme courtesy, forbearance and patience and was glad that the proceedings had been brought to a close within the allotted time.

Mr. Chunilal B. Mehta proposed a hearty vote of thanks to the Chair for guiding the deliberations of the Committee in a very able and tactful manner. He also thanked the Secretary for the prompt and successful way in which he had assisted in the proceedings of the meeting.

P. H. RAMA REDDI.

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Attempts made to organise regulated cotton markets under the Bombay Cotton Markets Act.

1 "The Indian Central Cotton Committee thanks the Bombay Government for acceding to its request by sending copies of the first report on the working of the Dhulia Cotton Market to all District Local Boards and Municipalities. The results already achieved are encouraging and the Committee trusts that the spread of the knowledge of the benefits of regulated markets will lead to the establishment of a larger number of such markets in the near future" 10

Revised Indore Cotton Market Rules.

2 "The Indian Central Cotton Committee wishes to express its appreciation of the interest shown by the Indore Darbar in connection with the regulation of cotton markets in the State and trusts that its efforts in this direction will have the desired effect of securing better prices to the grower of cotton" 10

Universal Standards for Indian Cottons.

3 "That a copy of the previous discussion on this subject be circulated to all commercial and agricultural bodies interested in cotton and to the Government of India and that the matter should be brought up at the next meeting of the Committee for further discussion and final decision" 11

Madras Cotton Control Bill.

4 "The Indian Central Cotton Committee thanks the Madras Government for the opportunity afforded to it of expressing its views on the Madras Cotton Control Bill and for giving effect to its recommendations by incorporating the necessary amendments in the Bill" .. 11

Proposed Compilation and Publication of Cotton Forecasts by the Committee.

5 "That before this memorandum was compiled the Local Sub-Committee should invite all the members to send an expression of their views with their reasons therefor and the Secretary, who would then finally collect all the information, should put them before the Local Sub-Committee" 16

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Raw Cotton Trade Statistics.

6 "That the Government of India be requested to arrange for separate trade statistics for loose cotton for such trade blocks as, in the opinion of the provincial authorities responsible for the compilation of cotton forecasts, are of importance for their purposes" .. 16

Report of the Standing Finance Sub-Committee.

7 "That the Report of the Standing Finance Sub-Committee be adopted.

Revised Estimates for 1932-33.

"That the Revised Estimates for 1932–33, as now amended, be adopted.

Budget for the Pay of Government Officers for 1933-34.

"That the Budget for the pay of Government officers for 1933–34 be approved" 17

Report of the Agricultural Research Sub-Committee on Progress Reports and General Items.

8 "That the Report of the Agricultural Research Sub-Committee on items 31 and 26 to 30 and 33 and 34 and on progress reports be approved" 21

Appointment of Selection Sub-Committee for Cotton Botanists in Bombay and the Punjab.

9 "That the Selection Sub-Committee for the appointment of Cotton Botanists for Bombay and the Punjab consist of :—

The President,
Sir Purshotamdas Thakurdas,
Dr. W. McRae,
Mr. T. F. Main, and
Mr. S. D. Saklatvala ;

and that the Standing Finance Sub-Committee be authorised to consider the report of the Selection Sub-Committee and make the appointments" .. 21

Report of the Agricultural Research Sub-Committee on New Schemes.

10 "That the Report of the Agricultural Research Sub-Committee on new schemes be adopted subject to the amendment on item 7 (*iii*) as already passed" .. 21

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	Institute of Plant Industry, Indore—Report of Policy to be followed.	
13	"That the Indian Central Cotton Committee approves of the future policy and programme of research work of the Institute of Plant Industry, Indore, as laid down in the Report submitted by the Director, subject to the amendment proposed by Mr. Collins" ..	22
	Representation of the Indian Central Cotton Committee on the Advisory Board of the Imperial Council of Agricultural Research.	
14	"That the Indian Central Cotton Committee approves the action of the Standing Finance Sub-Committee in appointing Rao Bahadur Bhimbhai Ranchodji Naik on the Advisory Board of the Imperial Council of Agricultural Research *vice* Mr. S. D. Saklatvala resigned"	22
	Provincial Cotton Committees.	
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	Proposal to hold a meeting of the Committee in Sind.	
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18	"That the Report of the Standing Finance Sub-Committee on the fumigation accounts for the year 1931-32 be adopted"	16
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19	"That Rao Bahadur Bhimbhai Ranchodji Naik and Mr. M. P. Kolhe be appointed to represent the growers' interests on the Board of the East India Cotton Association"	25
	Progress Report of the Director, Technological Laboratory.	
20	"That the Progress Report of the Director, Technological Laboratory, be approved"	17
	Report of the Technological Research Sub-Committee.	
21	"That the Report of the Technological Research Sub-Committee be adopted"	17

APPENDIX I.

SUBJECT 3.—*Comments of the Government of India on the Annual Report of the Committee.*

Copy of letter No. 570-Agri., dated the 30th April 1932, from the Officiating Secretary to the Government of India, Department of Education, Health and Lands, to the President, Indian Central Cotton Committee.

ANNUAL REPORT OF THE INDIAN CENTRAL COTTON COMMITTEE, 1931.

I am directed to acknowledge, with thanks, the receipt of copies of the above-mentioned report forwarded with Mr. Ritchie's letter No. P. 45, dated the 22nd February 1932. The annual report of the Indian Central Cotton Committee has, since the inception of the Committee, been a record of successful effort in promoting the interests of all branches of the cotton industry but especially those of the grower, whose welfare the Committee points out is its chief concern. The present report is no exception to that rule and the Government of India are glad to observe the progress which has been made in various directions, the most striking feature of which has been the development of the Committee's research work. I am to convey the appreciation of the valuable services rendered by the members and the Secretary of the Committee throughout the year to which the report relates.

APPENDIX II.

SUBJECT 4.—*Changes in the Personnel of the Committee and Sub-Committees.*

Secretary's Note.

The following changes in the personnel of the Committee and Sub-Committees have taken place due to either the annual retirement of one-third of the members, or to resignations and additions :—

(1) 1. Mr. Nalini Ranjan Sarkar replaces Mr. Girija Prasanna Chakravarty as the representative of Bengal.

2. Khan Bahadur Maulvi Muhammad Obaidur Rahman Khan takes the place of Rai Bahadur M. Amba Prasad as one of the United Provinces cotton growers' representatives.

3. Mian Nurullah replaces Sardar Ujjal Singh as one of the Punjab cotton growers' representatives.

4. Rao Bahadur G. R. Kothare takes the place of the late Rao Bahadur K. J. Deshmukh as one of the representatives of the cotton ginning or cotton manufacturing industry in the Central Provinces and Berar.

5. Mr. S. V. Ramamurty represents the Madras Agricultural Department in place of Mr. D. G. Munro.

6. Mr. Robert Lee takes the place of Mr. H. B. Moore as the representative of the cotton manufacturing or cotton ginning industry of the Madras Presidency.

7. Mr. Ghulam Muhammad Khan has been appointed as an additional member by the Governor-General-in-Council to represent the cotton growers of Sind.

8. Lala Shri Ram has been appointed as an additional member by the Governor-General-in-Council as a representative of the Cotton Millowners of Delhi.

9. Khan Bahadur Sardar Habibullah takes the place of Ch. Zafrulla Khan as the representative of the cotton manufacturing or ginning industry in the Punjab.

(2) *Standing Finance Sub-Committee.*—Sir Joseph Kay has gone on short leave and his place on the Sub-Committee remains unfilled. Mr. J. Vonesch has also gone on short leave and in his vacancy Seth Narandal Jivanlal has been temporarily appointed till the end of August 1932.

(3) On the *Local Sub-Committee,* the two vacancies caused by the absence of Sir Joseph Kay and Mr. J. Vonesch on short leave remain unfilled.

(4) On the *Cotton Ginning and Pressing Factories Sub-Committee,* there are three temporary vacancies owing to the absence on leave of Sir Joseph Kay, Mr. W. Roberts and Mr. J. Vonesch and one permanent vacancy owing to the resignation of his membership by Mr. H. B. Moore. This Sub-Committee has not met during the current financial year and the question of filling the vacancies will be considered when the Sub-Committee next meets.

(5) *Agricultural Research Sub-Committee*—

Rai Saheb K. Sawhney has been co-opted a member of this Sub-Committee for the meeting of July 30.

Messrs. S. V. Ramamurty and Roger Thomas and Dr. W. McRae have also been invited to serve on the Sub-Committee for this meeting.

The vacancy caused by the resignation of membership by Mr. D. G. Munro remains unfilled.

The following six members of the Sub-Committee are temporarily out of India :—

Sir Joseph A. Kay (Vice-President),
Mr. W. Roberts,
Mr. B. C. Burt,
Dr. W. Burns,
Mr. D. N. Mahta and
Mr. W. J. Jenkins.

Mr. Trought's successor has not yet been appointed.

(6) On the *Technological Research Sub-Committee*, Seth Kasturbhai Lalbhai takes the place of Sir Chinubhai Madhowlal as one of the co-opted members of the Ahmedabad Millowners' Association.

The places of Sir Joseph Kay and Mr. B. C. Burt who are out of India at present remain unfilled.

Dr. W. McRae has been invited to serve on the Sub-Committee in the absence of Mr. Burt.

Sir Purshotamdas Thakurdas has been co-opted as a member of this Sub-Committee.

APPENDIX III.

SUBJECT 5.—*Cotton Ginning and Pressing Factories Act—Progress made in Indian States.*

Secretary's Note.

Since the last meeting of the Committee the following further information has been received regarding the progress made in Indian States in the introduction of legislation on the lines of the Indian Cotton Ginning and Pressing Factories Act :—

Bikaner State.—Bikaner State Cotton Ginning and Pressing Factories Act of 1932 has been enacted. List of cotton pressing factories has not been received as yet, but cotton press returns are being received.

Dewas State, Junior Branch.—Legislation on the lines of the British India Cotton Ginning and Pressing Factories Act and Rules has been enacted by the Dewas Durbar, Junior Branch. It comes into force from 1st June 1932.

Dhar State.—Dhar State Cotton Ginning and Pressing Factories Act and Rules are expected to come into force from September 1932.

Gwalior State.—The Council Committee has accepted the draft of Cotton Ginning and Pressing Factories Act and Rules and it is before the full Council.

Malerkotla State.—The British India Cotton Ginning and Pressing Factories Act and Rules thereunder have been adopted by the State from 1st March 1931. List of pressing factories has been received.

The present position is that 62 States have now enacted legislation on the lines of the British India Act and 56 States supply weekly cotton press returns.

APPENDIX IV.

SUBJECT 6—*Summary of Proceedings of the Cotton Ginning and Pressing Factories Sub-Committee.*

Secretary's Note.

Only one meeting of the Sub-Committee was held on the 8th February 1932 since March 1930 and the principal subject discussed was the licensing of ginning and pressing factories. The Sub-Committee decided, after a lengthy discussion, that the views of the trade associations represented on the Indian Central Cotton Committee should be obtained before the subject was further discussed, and their views have since been received. The subject will come for further consideration at the next meeting of the Local Sub-Committee which will report to the full Committee in December next.

The Sub-Committee also dealt with the subject of the re-use of old hoops, and it was decided to draw the attention of all presses to the prevalence of duplicate marks on hoops and to point out to them that stencilling on the hessian was allowed. The attached letter was accordingly sent out to all Local Governments.

Copy of circular letter No. 3120-3130, dated the 26th February 1932, from the Secretary, Indian Central Cotton Committee, to all Local Governments.

MARKING OF BALES—RE-USE OF OLD HOOPS.

I have the honour to inform you that frequent complaints are being received by my Committee that bales of cotton are being issued from pressing factories with duplicate marks punched on the hoops, thus defeating the intentions underlying the Cotton Ginning and Pressing Factories Act of 1925. My Committee is aware that there has always been a considerable trade in second hand hoops, but this has recently become more pronounced by reason of trade depression and financial stringency. My Committee does not wish to interfere in any way with this trade, but it is concerned with the proper working of the Cotton Ginning and Pressing Factories Act. These second hand hoops are bought by press-owners and used again without any care being taken to see that previous press marks have first been deleted. I have the honour, therefore, to request you to draw the attention of press-owners who use second hand hoops to the necessity for deleting from the hoops any marks other than their own before the bales are allowed to leave the Factory.

My Committee is of opinion however that the difficulty would largely solve itself if press-owners were made aware that under the amended Rule 7 of the Rules under the Cotton Ginning and Pressing Factories Act stencilling on the hessian is permitted. When the Act first came into force punching on the hoops was the only method allowed. For various reasons, which it is not necessary to enumerate here, the Government of India, at the request of this Committee, amended in 1929 Rule 7 under the Act to permit of any form of marking provided the letters and figures used were in English characters and decipherable. Stencilling is easier and more expeditious and my Committee feels that if it was brought to the notice of all press-owners that stencilling on the hessian was permissible, marking on the hoops would become obsolete.

I have the honour, therefore, to request you, if you see no objection, to bring the amended Rule to the notice of press-owners.

APPENDIX V.

SUBJECT 7—*Cotton Marketing—Attempts made to organise regulated cotton markets under the Bombay Cotton Markets Act.*

Secretary's Note.

The first annual report on the working of the Dhulia Cotton Market was considered by the Committee at its meeting held in December 1931, when the following resolution was unanimously passed :—

"The Central Cotton Committee has read with considerable pleasure the first report on the working of the Dhulia Cotton Market and suggests to the Bombay Government that a copy should be sent to every District Local Board and Municipality in the Presidency interested in cotton with a view to acquainting them with the successful establishment of a market run in the interests of the grower."

A copy of the above resolution was forwarded to the Bombay Government.

APPENDIX VI.

SUBJECT 8.—*Cotton Marketing—Revised Indore Cotton Market Rules.*

Secretary's Note.

The Rules for the regulation of cotton marketing in Indore were considered by the Indian Central Cotton Committee at its meeting held in July 1930. These rules came into force from the 1st November 1929 and were for a period of two years to begin with. The Darbar has since issued revised rules which were published in the "State Gazette" of March 7, 1932. The most important changes between the old and new rules relate to the appointment of the Market Committee. The old rule dealing with this question is

reproduced below. A copy of the new rules is attached. They seem to require no comment.

Extract from the old Indore Cotton Market Rules published in the "Holkar Sirkar Gazette" of November 11th, 1929.

"(1) That a Managing Committee, called the 'Indore Cotton Market Committee' may be appointed for the management of the Market in the following manner:—

(*a*) The Committee shall consist of five Members and one President to be appointed by the Prime Minister on the recommendation of the Commerce and Industry Member. The President will be an Officer of the State. Of the five members one shall represent Mills, one Brokers, one merchants, one growers and the fifth member will be the Amin or Naib Amin of Indore.

* * * * * * * *

THE HOLKAR GOVERNMENT GAZETTE, MARCH 7, 1932.

COMMERCE AND INDUSTRY DEPARTMENT.

Notification.

Notification No. 3, dated the 19th February 1932.

In supersession of this Office Notification No. 4331, dated the 29th October 1929, published in "Holkar Sirkar Gazette", No. 8, dated the 25th November 1929, it is hereby notified for general information that His Highness the Maharaja, under Huzur Shree Shankar Order No. 55, dated the 8th February 1932, has been pleased to sanction the following rules for the conduct of business at the Indore Cotton Market. A translation of the Rules will be published in due course.

S. SUDAGOPAN,
Secretary,
Commerce and Industry Department.

C. R. PALAIRET,
Member for Industries and Commerce, Indore.

Rules for the Indore Cotton Market.

1. That a Managing Committee called the "Indore Cotton Market Committee" be appointed for the management of the Market in the following manner:—

(*a*) The Committee shall consist of 11 members including the President and of the 11 members, 3 shall be the representatives of the Mill Companies, 3 of the Cotton Merchants' Association including the exporters, 2 from the brokers and 3 from the Growers.

(*b*) The representatives of the Mills on the Committee will be the agents of the Managing Agents of the Mills. The representatives of the Mills would be elected by the Managing Agents of the Mill Companies or their nominees, every Mill Company having one vote. The representatives of the Mills should retire at the end of a year and the Mills will elect 3 new representatives from amongst the nominees of the remaining Mills in rotation. The Mills, whose representatives have retired, will have no right to send their representatives on the next Committee except when the Agents or the Managing Agents of all the Mills or their nominees unanimously come to the decision that a representative or representatives of the Mills who have already retired may be re-elected. The representatives of the Cotton Merchants and the brokers will be nominated by the Cotton Association which may be formed provided that the Cotton Association also includes under its rules brokers as members. In case this is not so, the brokers' representatives will be elected by the brokers themselves. With regard to the growers their representative on the Legislative Committee will be an Ex-officio Member and the other two members will be the head of the Rural Development Department, and a representative of the Co-operative Department.

2. The Prime Minister shall have power to remove any member at any time from the Committee if he thinks that his presence is either undesirable or useless.

3. The term of office of the Committee shall be one year at the end of which fresh nomination shall take place.

4. The President will be elected by the Committee from one of its members.

5. The names of the persons appointed will be notified in the *Holkar Government Gazette* and they shall be deemed to hold office from 1st of October each year. Similarly any changes in the personnel of the Committee will be notified in the Gazette.

6. The Committee may frame bye-laws consistent with these rules for the conduct of the business of the Committee and for the levy of fees and charges within the Cotton Market. The latter will require previous sanction of the Government.

7. The Committee may also appoint one or more of its members to be a sub-committee or to be a joint committee for the conduct of any work or works or to report on any matter or matters and may delegate to any one or more of its members such of its own powers as may be necessary.

8. The President shall have a casting vote in addition to the ordinary vote.

9. A Minute Book shall be kept of all the proceedings over the signature of the President.

10. The Committee shall be under the supervision of the Commerce and Industry Department. The bye-laws framed by the Committee may be revisd by Government on the recommendation of the Commerce and Industry Member.

11. Until further orders, in addition to the fees levied by the Market Committee, the usual framing fees levied by the municipal authorities for farming the carts at the Market for more than 12 hours shall be collected at one anna per cart per day. Similarly the municipal tax for the use of godowns within the premises of the Market will be recovered as usual by the Municipality who will be responsible for the upkeep of the roads etc. in the Market.

12. In case of evasion or attempt to evade payment of the fees a fine may be leviable by the Committee to the extent of Rs. 25.

13. No person shall expose cotton for sale at any public place (except for household use) within the limits of the Indore City Municipality other than the Market, unless otherwise authorised and every person bringing cotton for sale into the Market shall on entering the Market pay all fees and taxes in force at the time.

14. The Committee shall have absolute control of the Market Yard so far as their actions are consistent with the rules that may be in force. The gates shall be closed and opened at such hours as the Committee may from time to time direct. The carts shall stand in such places and for such time as may be prescribed, and ingress and egress may be permitted to such persons and at such times, as the Committee may consider proper.

This rule will not apply to Government or municipal servants.

15. In the Market proper the Committee shall exercise all such rights which may be necessary for efficient control of the Market yard and for the convenience and comfort of the persons using the Market for the collection of the fees. The Committee may, in the Market area, exercise such control over carts, cartsmen and other persons who may appear in the Market as may be necessary to prevent traffic to and from the Market being impeded subject to the proviso that any Police cognizable cases will not be interfered with by the Committee but reported on to the Police. The Committee may also prevent any cart laden with ginned or unginned cotton, especially if fees have not been paid, from standing in any portion of the area or entering the area without express permission of the Committee.

16. Any person entering or attempting to enter into Market yard when directed in writing stating reasons not to do so or disobeying the direction of the Committee in regard to places where carts laden with cotton may stand or in regard to the roads by which, and in regard to the times, at which they may proceed, shall be liable to be punished as trespasser.

17. All weights will be in accord with the standard proclaimed by the Government and unauthorised weights and scales shall be liable to be confiscated under the rules of the Government in force.

18. The use of incorrect or unauthorised weights and scales shall be punishable in accordance with sections 264 and 265 of the Indore Penal Code.

APPENDIX VII.

SUBJECT 10.—*Madras Cotton Control Bill.*

Secretary's Note.

The Local Sub-Committee considered the original draft of the Madras Cotton Control Bill at its meeting of the 28th September 1931 and passed the following resolution :—

" That this Sub-Committee considers Clause 5 (1) (*ii*) rather drastic and the penalties contemplated in Clauses 4 and 6 (2) very severe considering the fact that the bill is the

first of its kind in India and recommends to the Madras Government that the bill might be passed with necessary modifications to make it less severe. Drastic legislation could be introduced later on, if necessary."

The Central Cotton Committee at its last meeting confirmed by resolution the action of the Sub-Committee and further recommended "that the scope of the Bill should be restricted to the growing of *Pulichai* cotton in the Tinnevelly area".

The clauses of the draft bill affected are reproduced below :—

"*Clause* 4.—Whoever, in contravention of any notification under Section 3 * * * * * * shall be liable to a fine which may extend to fifty rupees and in default to simple imprisonment which may extend to one month and upon any subsequent conviction to a fine which may extend to five hundred rupees and in default to simple imprisonment which may extend to six months."

Penalties.

Power of entry and seizure.

"*Clause* 5.—(1) Any officer authorised in this behalf by the Local Government may—

(*ii*) in case of resistance to entry under clause (*i*), break open any door and remove any other obstacle to such entry ;"

Duty of owner and occupier to give facilities for inspection by authorised officer.

"*Clause* 6.—(2) Whoever commits a breach of the provisions of sub-section (1) shall be punishable with fine which may extend to Rupees fifty."

The recommendations of the Committee have been accepted by the Madras Government. The bill with the necessary modifications has been passed by the Legislative Council and awaits the assent of the Governor and Governor-General. A copy of the bill is attached. With reference to the Committee's recommendation to restrict the scope of the bill to Pulichai cotton in the Tinnevelly area, clause 3 of the bill as passed by the Council would appear to meet the object of the Committee.

Copy of Bill No. 3 of 1932.

A Bill to provide for the prohibition of the cultivation of pulichai cotton and the mixing of such cotton with other cotton and for the prohibition or restriction of the possession or use of, or the trade in, pulichai cotton or cotton mixed with pulichai cotton.

WHEREAS it is expedient in the best interests of the growers of cotton in certain areas in the Presidency of Madras, the cotton trade and the economic prosperity of the said Presidency, to maintain the quality and reputation of the cotton grown in those areas and for that purpose to prohibit the cultivation of pulichai cotton and the mixing of such cotton with other cotton and to prohibit or restrict the possession or use of, or the trade in, pulichai cotton or cotton mixed with pulichai cotton.

AND WHEREAS the previous sanction of the Governor-General has been obtained to the passing of this Act :

It is hereby enacted as follows :—

Short title and extent.

1. (1) This Act may be called the Madras Cotton Control Act, 1932.

(2) It extends to the whole of the Presidency of Madras.

Definitions.

2. In this Act, unless there is anything repugnant in the subject or context :—

(*a*) "cotton" means cotton plant, ginned and unginned cotton, cotton waste and cotton seed ;

(*b*) "notified area" means an area specified in a notification under section 3 ; and

(*c*) "pulichai cotton" means the kind of cotton known as G. neglectum var. roseum.

Power of Local Government to issue notification prohibiting the cultivation, etc., of pulichai cotton.

3. The Local Government may, by notification in the *Fort St. George Gazette*, in such local area and for such period as may be specified in the notification :—

(*a*) prohibit the cultivation of pulichai cotton ; or

(*b*) prohibit the mixing of pulichai cotton with any other kind of cotton ; or

(*c*) prohibit or restrict the possession or use of, or the trade in, pulichai cotton or cotton mixed with pulichai cotton.

Penalties.

4. Whoever, in contravention of any notification under section 3 :—

(*a*) cultivates pulichai cotton, or

(*b*) mixes pulichai cotton with any other kind of cotton, or

(*c*) possesses, uses or trades in pulichai cotton or any cotton mixed with pulichai cotton shall be punishable with fine which may extend to twenty rupees and upon any subsequent conviction with fine which may extend to fifty rupees.

Power of entry and seizure.

5. (1) Any Officer authorized in this behalf by the Local Government may between the hours of 6 a.m. and 6 p.m. :—

(*a*) enter upon any land in a notified area in which he knows or suspects that pulichai cotton is being cultivated in contravention of a notification under section 3 uproot or cause to be uprooted such cotton, and seize the cotton so uprooted ; and

(*b*) enter upon or into any land, building, vessel or place in a notified area in which he knows or suspects that pulichai cotton or any cotton mixed with pulichai cotton is kept in contravention of a notification under section 3, and seize such cotton.

(2) Every officer seizing any cotton under this section shall forthwith :—

(*a*) make a report of such seizure to the Magistrate having jurisdiction to try the offence committed in respect of such cotton, together with particulars of such cotton and furnish a copy of such particulars to the occupier of the land, building, vessel or place on or in which such seizure was made, and

(*b*) subject to such rules as the Local Government may prescribe, forward such cotton to the nearest officer authorized by the Local Government to receive it, for examination and report to the Director of Agriculture, Madras.

(3) The opinion of the authorized officer referred to in clause (*b*) of sub-section (2), contained in any document signed by such officer regarding the cotton sent to him for examination under that clause, may be used as evidence as to the nature of such cotton, in any inquiry, trial or proceeding under this Act.

Duty of owner and occupier to give facilities for inspection by authorized officer.

6. (1) Every owner or occupier of any land, building, vessel or place shall give all reasonable facilities to any officer authorized under sub-section (1) of section 5 to inspect such land, building, vessel or place.

(2) Whoever commits a breach of the provisions of sub-section (1) shall be punishable with fine which may extend to twenty rupees.

Previous sanction and limitation for prosecution.

7. No prosecution for an offence made punishable by this Act or any rule made thereunder shall be instituted :—

(*i*) without the previous sanction of the Director of Agriculture, Madras, or

(*ii*) after six months from the date of the commission of the offence.

Trial of offences.

8. No offence made punishable by this Act or any rule made thereunder shall be inquired into or tried by any Court inferior to that of a Presidency Magistrate or a Magistrate of the second class.

Indemnity.

9. No suit, prosecution or other legal proceeding whatever shall be entertained in any Court against any person for anything in good faith done or intended to be done in pursuance or execution of this Act.

Power of Local Government to make rules.

10. (1) The Local Government may, by notification in the *Fort St. George Gazette*, make rules consistent with this Act to carry into effect the purposes thereof.

(2) In making any rule, the Local Government may provide that a breach thereof shall be punishable with fine which may extend to twenty rupees.

APPENDIX VIII.

SUBJECT 11.—*Cotton Statistics—Proposed compilation and publication of cotton forecasts by the Committee—Reply from the Government of India.*

Secretary's Note.

At its 23rd meeting the Indian Central Cotton Committee passed the following resolution :—

"The Central Cotton Committee desires to draw the attention of the Government of India to paragraph 261 of the Report of the Indian Cotton Committee (1919) in

which the suggestion is made that the Central Cotton Committee might compile and publish the All-India Cotton Forecasts. The Committee requests the Government of India to implement that suggestion as it considers it is the proper body to undertake such work."

This resolution was duly forwarded to the Government of India, but they did not approve of it.

APPENDIX IX.

SUBJECT 12.—*Cotton Statistics—Raw Cotton Trade Statistics.*

Secretary's Note.

At the 24th meeting of the Indian Central Cotton Committee, the Director of Agriculture, Bombay Presidency, submitted a note comparing the forecast crop of 1930-31 with the cotton pressed. In this note he requested the Indian Central Cotton Committee to ask the Director-General of Commercial Intelligence and Statistics to publish separate trade statistics for loose cotton. A formal resolution on this subject was not then passed, as the Committee agreed to the suggestion that the Director-General of Commercial Intelligence and Statistics' views on this subject should first be obtained. The note since supplied by the Director-General of Commercial Intelligence and Statistics and his subsequent letter showing the estimated total extra cost involved in the proposal are attached.

No difficulty is anticipated in the collection and publication of separate figures for pressed and loose cotton, and the total extra cost involved is not considerable. As the volume of rail borne trade in loose cotton is however comparatively small, and such trade is mostly of a local nature in particular areas, there is no need to collect or to publish figures for all the trade blocks in India. It would be enough if the Government of India authorises the Director-General of Commercial Intelligence and Statistics to comply with the requests of the Provincial authorities responsible for the compilation of cotton forecasts for information with reference to the blocks with which they are concerned. This will satisfy the requirements of the Director of Agriculture, Bombay Presidency, as well as of any other Director of Agriculture in future, and at the same time reduce the expenditure on this account considerably.

Note by the Director-General of Commercial Intelligence and Statistics.

Under the existing arrangements all railways in India supply this Department with a monthly return showing the figures of raw cotton imported into each trade block, situated on each railway from every other block situated on its own or a foreign railway. The returns are compiled by the railways from the invoices. Bookings from one station to another in the same trade block are not registered. A deduction of 3 per cent. is made from the gross weight of cotton for packing. Blank forms for the registration of these statistics are supplied to the railways with the names of the different internal trade blocks in India.

Similar arrangements have also been made with the inland steamship companies for the supply of the following statistics of raw cotton :—

(1) Trade in raw cotton between the different trade blocks of Bengal and the trade blocks of Assam.
(2) Between the internal trade blocks of Assam with one another.
(3) Between the different internal trade blocks of Bengal with one another.
(4) Between Calcutta and Bihar and Orissa.
(5) Between Calcutta and the United Provinces.
(6) Between Assam and Bihar and Orissa.

No road borne traffic is registered and included in these statistics.

The figures in all these returns are assembled in this Department and published every month.

The present proposal regarding the separation of figures of loose cotton from those for pressed or baled cotton involves some increase of work both in the railway and steamer offices as also in this Department. It is probable that the railways will ask for increased subsidies if the traffic in pressed and loose cotton have to be shown separately. The exact amount of increase cannot be ascertained unless the proposal is put before the railways. The total amount of subsidy at present payable to the railways and

steamship companies for the registration of statistics of raw cotton alone is about Rs. 9,800 per annum. It is not likely that the Government of India will sanction any increase in expenditure on this account unless very strong reasons in support of the proposal are put before them.

Copy of letter No. 7269-Q, dated the 8th June 1932, from the Director-General of Commercial Intelligence and Statistics, to the Secretary, Indian Central Cotton Committee.

RAW COTTON TRADE STATISTICS.

With reference to the correspondence ending with your letter No. 2741, dated the 10th February 1932, on the above subject, I have the honour to say that the railway and steamship companies concerned in the registration of raw cotton statistics do not anticipate any difficulty in supplying separate monthly figures for pressed cotton and loose cotton but some of them have asked for extra subsidies for this additional information. The total extra cost involved in the proposal is Rs. 166-12-0 a month or Rs. 2,001 a year.

APPENDIX X.

SUBJECT 13.—*Report of the Standing Finance Sub-Committee on the fumigation of American cotton—Accounts for* 1931-32.

At its 23rd meeting the Indian Central Cotton Committee recommended a rebate of eight annas a bale on all American cotton fumigated during the financial year 1930-31. This rebate has since been sanctioned by Government and disbursed to importers.

A note* on the fumigation accounts for the year ending 31st March 1932 is attached. We recommend that the Government of India should be requested to allow a rebate of eleven annas per square bale and seven annas per round bale on the bales and packages fumigated during this period.

We also agree to the proposal made in the note that the period of the existing contract with Messrs. J. K. and Cooper Landing Company should be extended by three or four months to allow the change-over from one contractor to another during the slack season. Also the necessity to obtain competitive rates for transportation of American cotton by relaxing the conditions of tender should be impressed upon the Government of India and the Bombay Port Trust.

We do not consider it necessary to make at present any alteration in the existing arrangements regarding the staff.

APPENDIX XI.

SUBJECT 14.—*Summary of Proceedings of the Local Sub-Committee.*

Since the last meeting of the Indian Central Cotton Committee in December the Local Sub-Committee held four meetings including the special meeting which was held on the 15th December. Sir Joseph Kay and Mr. J. Vonesch, members of the Sub-Committee, have gone on leave out of India and their places remain unfilled. Mr. D. McCallum resigned his membership on the Committee and the question of filling his vacancy on the Sub-Committee will be taken up when his successor is appointed.

2. The Local Sub-Committee was called upon to decide the difference of opinion between Mr. B. A. Collins, the Director-General and Secretary to Government, Department of Commerce and Industry, His Exalted Highness the Nizam's Government, Hyderabad-Deccan, and the Director of Agriculture, Bombay, in regard to the issue of licenses for import of cotton from Raichur district, Nizam's Dominions, to the Gadag Market. Mr. Collins held that unless the Director of Agriculture stopped issuing licenses it would be very difficult for him to organise any cotton market and spread pure cotton in the Raichur-Gulbarga tract which had been declared a protected area and for which the Committee had sanctioned a Seed Distribution Scheme. The Sub-Committee concluded after hearing both sides that it could not interfere with the discretion of the Director of Agriculture as no breach of the rules of the Cotton Transport Act was proved.

3. The Sub-Committee considered a letter from the Director of Agriculture, Bombay, requesting for directions as to what procedure he should adopt in granting general

* Not printed.

licenses under the Cotton Transport Act for the import of cotton by sea from Bombay to Broach. The Sub-Committee resolved that the Government of India be addressed on the necessity of lowering the railway rates to avoid losses to the railway companies from the competition of sea transport since transport of cotton by sea from Bombay to Surat and from there by train to places of consumption was at present cheaper than sending direct by train. It was also decided that the Government of Bombay be approached to amend rule 3 of the Bombay Rules under the Cotton Transport Act and also Forms B and C to permit the transport of cotton by rail, road, river or sea for mill consumption.

4. The Director of Agriculture, Bombay, made a reference to the Sub-Committee as to whether it was possible that he could issue, as a special case, to well known firms general licenses for import of full pressed bales of cotton from certain stations outside the protected area into Broach and Surat for transport to Bombay by sea. The Sub-Committee decided that no such exception should be made as any concession of this sort was likely to result in slackening of rules.

5. Mr. M. P. Kolhe, one of the members of the Committee, brought to the notice of the Committee that the cultivators in Central Provinces were subjected to the payment of income-tax on their ginned cotton and that the Committee should protest against the levy of this tax. The Sub-Committee decided that the Government of India should be approached to exempt the cultivator from income-tax when he ginned his own cotton.

6. The Sub-Committee considered the suggestion made by Mr. M. P. Kolhe that the Committee should make a specific recommendation to the Central Provinces Government to combat the evils of the ginning and pressing pools, as in his opinion the Government were not likely to take any definite action on the non-commital resolution which has already been passed by the Committee. The Sub-Committee decided that it should take no further action.

7. The Sub-Committee appointed a representative Sub-Committee consisting of nine members to draft a reply to the specific questions received from the Tariff Board with regard to its enquiry into the Cotton Textile Industry. A copy of the draft reply has since been sent to the Tariff Board on the distinct understanding that it represents the views of only nine members and that any fundamental differences which the other members may have would be forwarded after the meeting of the full Committee.

8. The Sub-Committee considered the letter received from the East India Cotton Association that the Indian Central Cotton Committee should request the Central Provinces Government and the Hyderabad State to afford the Association an opportunity of expressing its opinion on the question of the incidence of the market license fees before these authorities fixed their rates. The Sub-Committee decided that it should suffice if in future the Central Provinces Government and the Hyderabad State afforded to the Indian Central Cotton Committee an opportunity to express its opinion before the rules to increase the license fees were passed.

9. The Sub-Committee considered the amended notification issued by the Indore Darbar under their Cotton Transport Act by which the necessity of obtaining licenses was limited to importers of "Deshi Mewadi" cotton only instead of to importers of all cotton as originally notified. This amendment was given effect to in view of the representation of the local mills that they could not easily get their supplies of cotton as according to the practice in vogue there, farmers from outside the State bring their cotton to the markets and the mills purchase their supplies at these markets. Owing to the necessity of having to obtain licenses farmers are seriously handicapped and take their *kapas* elsewhere. The Sub-Committee decided to consult Mr. Palairet to find out means to overcome the difficulties of the farmers and, if necessary, to hold a Conference with the Indore traders and millowners.

10. The question of communicating to non-official members of the Committee confidential information received in the Secretary's office from Government or Government Officers also engaged the attention of the Sub-Committee and it was decided that such information should be supplied, if asked for, to members of the Local Sub-Committee only.

11. On the information supplied by Messrs. Narandas Rajaram & Co. that Goghari seed had been sown this year in the Navsari tracts in British India and Baroda State, enquiry elicited the fact that in certain villages in Baroda State mixture in a pronounced manner had taken place and that in British territory too some villages had mixed their cotton. The Sub-Committee decided that strong representations should be made to the Governments concerned.

APPENDIX XII.

SUBJECT 15.—*Technological Research.*

SUMMARY OF PROGRESS REPORT (No. 18) OF THE DIRECTOR, TECHNOLOGICAL LABORATORY, MATUNGA.

INTRODUCTION.

The present report describes the work done at the Technological Laboratory during the seven months from 1st November 1931 to 31st May 1932. Owing to the fact that the 1931-32 cotton crop of India was late in several provinces, notably Central Provinces, Berar, and the Punjab, the arrival of samples for the spinning tests was delayed this year by four to five weeks. Nevertheless it will be seen from the figures given below that as compared with the corresponding period of last year there has been a further increase in the number of samples received for tests at the Laboratory resulting in the setting up of a new record. This increase is most marked in the case of agricultural samples of which 187 were received during the period under review as compared with 148 during the corresponding period of last year. The work done will be described in the following five sections of the report, a perusal of which will show that good progress has been made in all departments of the Laboratory :—

I. Spinning Laboratory.
II. Research Laboratory.
III. Moisture Testing Section.
IV. Publications.
V. General.

I. SPINNING LABORATORY.

The following table gives the distribution of samples received for tests up to 31st May 1932, together with the figures for the corresponding period of last year for purposes of comparison :—

Table I.

	1st November 1931 to 31st May 1932.	1st November 1930 to 31st May 1931.
Agricultural Departments	187	148
Standard cottons	18	21
Trade samples	23	52
Fibre Test samples	29	17
Yarn Test samples	24	55
Special Test samples	20	....
Total ..	301	293

It will be seen from the above table that during the period under review 301 samples were received as against 293 in the corresponding period of last year. The decrease in the number of trade samples is due to the lateness of the 1931-32 cotton crop to which a reference has been made above.

The number and distribution of samples, lots and counts actually spun during the period under review together with the corresponding figures of last year are given in Table II.

Table II.

	Samples.		Lots.		Counts.	
	1st November 1931 to 31st May 1932.	1st November 1930 to 31st May 1931.	1st November 1931 to 31st May 1932.	1st November 1930 to 31st May 1931.	1st November 1931 to 31st May 1932.	1st November 1930 to 31st May 1931.
Bombay ..	34	60	34	61	101	162
Punjab ..	21	1	21	1	70	5
United Provinces.	7	12	7	12	22	24
Madras ..	1	1	1	1	3	3
Central Provinces.	3	3	3	4	9	12
Miscellaneous ..	11	10	11	11	26	46
Total ..	77	87	77	90	231	252
Standard ..	18	26	36	53	136	300
Trade Tests ..	23	49	25	55	69	191
Special Tests ..	37		78		237	
Grand Total ..	155	162	216	198	673	743

It will be seen from the above table that the number of samples spun during the period under review is very nearly the same as in the corresponding period of last year while the number of lots shows an increase of nearly 10 per cent. The average number of samples and lots spun per month equals 22·1 and 31 respectively as against 23·1 and 28·3 for the corresponding period of last year. The decrease in the number of counts is principally due to fewer standard cottons having been spun up-to-date, as these were received rather late in the season.

The results of tests on these samples were embodied as usual in spinning test, fibre test and yarn test reports, a summary of which is given in the following table which also shows the corresponding figures for last year.

Table III.

Reports.	1st November 1931 to 31st May 1932.	1st November 1930 to 31st May 1931.
Spinning Test Reports	24	45
Fibre Test Reports	9	5
Yarn Test Reports	1	3
Total ..	34	53

It will be seen from the above table that the number of Spinning Test Reports issued during the period under review is considerably less but the number of Fibre Test Reports is greater than in the corresponding period of last year.

Agricultural samples.—Most of the tests on the agricultural samples were of the routine type, but three series of tests being of special importance are mentioned below.

Banilla Cottons.—It will be remembered that last year 22 samples of Banilla cotton grown in the districts were received and tested at the Technological Laboratory. The object of these tests was to ascertain whether this cotton, when grown on a large scale in the fields, has undergone any deterioration in the last few years during which its cultivation has been extended. It was proposed to publish the results of those tests in a Technological Bulletin, but owing to the important nature of this investigation it was decided that tests on Banilla cotton should be repeated in the following season, and the results for both seasons should be published together. Accordingly samples of Banilla cotton of the 1931-32 crop have been received and are being tested. When their results are available it is proposed to publish the results of tests on two seasons' samples in a Technological Bulletin.

4F Cotton.—As is well-known this cotton forms an important constituent of the Punjab-American crop. This year six samples of 4F cotton were received from the Cotton Research Botanist, Lyallpur, who had grown them under conditions which were similar in all respects except that the watering treatment was different in each case. These samples were subjected to a very thorough examination with the object of finding out whether, and to what extent frequency and intensity of irrigation affects the fibre-properties and the spinning performance of 4F in general and maturity of its fibres in particular. A technological report on these samples has been forwarded to the Cotton Research Botanist, Lyallpur, which contains several interesting conclusions. It is found, for instance, that reduced rate of watering affects the fibre-length and the maturity of the 4F hairs in an adverse manner, but that these defects can be remedied if the cotton is given, even late in the season, a few additional waterings. It is hoped that further work on these lines may throw some light on the vexed problem of periodic failure of the Punjab-American crop, if this phenomenon is in any way connected with intensity of irrigation.

Green stained cotton from Sind.—In the beginning of the current season the Chief Agricultural Officer in Sind informed the writer that the Sind-American cotton grown on the Jamrao canal areas has developed a new and unsatisfactory feature, viz., green stain, which has greatly contributed to a depreciation in its price. It was accordingly arranged that the Chief Agricultural Officer should supply to the Technological Laboratory samples of *kapas* and lint of the green stained cotton together with a control sample for the purposes of tests, the object of which would be to find out in the first place, whether the green stain persists in the yarn after a normal treatment and secondly, the factors which are responsible for the appearance of the stain. Accordingly samples of lint and *kapas* of green stained Sind-American cotton were received and subjected to a thorough examination. The results of these tests showed that when yarns manufactured from the stained cotton are bleached, according to the ordinary bleaching operations adopted by the mills, the green tint disappears so completely that these yarns are indistinguishable from those prepared from the control sample. The fibre-tests showed that there was no appreciable difference between the mean fibre-length, the mean fibre-weight per inch or the maturity index of the stained and the unstained samples, while the yarn tests showed that both samples gave equally strong yarns. The ginning experiments showed that more stain came off in the lint if the *kapas* was damped before ginning than when it was ginned dry. It is to be concluded, therefore, that the presence of the green stain has not so far affected either the fibre-properties or the spinning performance of this cotton, and that after a normal bleaching treatment, not a trace of the green stain remains in its yarns. Consequently, a depreciation in its price is more due to an imaginary fear than to any serious defect in the cotton itself.

Trade Tests.—In accordance with the arrangements made with the East India Cotton Association, the Bombay Millowners' Association and the Ahmedabad Millowners' Association, the Technological Laboratory continued to receive samples of commercial cottons for spinning tests. The number of such samples received up to 31st May 1932 is 18. The results of tests on these samples have been published as in the past in the form of 2 page circulars which are circulated freely among the trade. Every effort is made to place these results in the hands of the trade in the minimum possible time, so that they may be of the greatest possible service. The following statement gives an account of the trade samples received up to 31st May 1932, together with their source and particulars of the Technological Circulars in which their spinning test results were reported upon.

A. *Samples supplied by the East India Cotton Association.*

Cotton.	Technological Circular No.	Date of issue.
Central Provinces No. 1	72	18th May 1932.
Muttia (Botad)		
Berar (Murtizapur)		
Lattur	73	21st May 1932.
Nanded		

B. *Samples supplied by the Millowners' Associations of Bombay and Ahmedabad.*

Cotton.	Technological Circular No.	Date of issue.
Dhulia (Khandesh)	60	23rd December 1931.
Ujjain (2 samples)	63	6th February 1932.
Khandesh (3 samples)	64	6th February 1932.
Broach (Salar)	69	5th May 1932.
Bailhongal		
Hubli-Kumpta		
Jagadia	70	6th May 1932.
Kadi		
Hubli-Kumpta	71	14th May 1932.
Hubli-Upland		

In addition to these trade samples one sample each were received from two mills which necessitated special investigation. One sample, though of fairly good quality, suffered very badly from stringiness, which was most probably due to defective ginning. On being subjected to a thorough test in the Spinning Laboratory it was found that by a suitable change in the settings of some of the processing machines its waste losses could be reduced and a slight gain in yarn strength achieved. The second sample was of Punjab-American cotton and suffered seriously from neppiness. This was also tested thoroughly and it was found that in this particular case neppiness was inherent in the cotton itself and that such changes in settings as are ordinarily recommended for dealing with neppy cottons were ineffectual. These two tests are of special importance as they show that the confidence of the industry in the advice and judgment of the Laboratory is steadily growing. The Laboratory has a qualified staff both for the scientific examination of the cotton fibre and the exact estimation of its spinning value, and, compatible with their other duties, they are always willing to help the industry in any manner they can. It is therefore a matter of gratification to see that the industry has begun to refer their difficulties to the Laboratory. It may not be always possible for the writer to solve these difficulties but even the attempt at their solution is a matter of scientific importance and whenever some tangible results can be obtained, they should be of the utmost value to the industry.

African Cottons.—It was mentioned in my last Progress Report that the East India Cotton Association approached the Technological Laboratory with the request that fibre

tests may be carried out on samples of fair average quality of A. R. Kampala, A. R. Busoga and A. R. Jinja in order to help the Association in fixing suitable standards for these cottons. Up to 31st May 1932, 27 samples of these cottons were received, tested and reported upon.

A summary of the results for the 1930-31 samples was placed before a meeting of the Special Appeal Committee of the East India Cotton Association apppointed to deal with this question, which recorded its sense of appreciation for the assistance given by the Laboratory.

It was decided at the meeting referred to above that in view of the necessity of having correct standards for these cottons which are imported into India in large quantities, it is desirable to continue these tests for another season. Accordingly samples of fair average quality of A. R. Kampala, A. R. Busoga and A. R. Jinja of the current season are being received and tested at the Laboratory.

High Draft Spinning.—The second series of tests relating to the application of high draft spinning to mixings of Indian cottons using the ordinary system and three high draft systems were completed some time ago. The results of these tests have now been published in the form of a Technological Bulletin, Series A, No. 19.

Adulteration of long staple cottons.—It was reported at the last meeting of the Technological Research Sub-Committee that tests have been made from time to time on mixings of long staple and short staple Indian cottons in order to ascertain the decline in the spinning performance of the former as a result of their adulteration with the latter. For the purposes of these tests mixings made from 4F + Mollisoni, 289F + Mollisoni, 289F + 4F and Karunganni + Pulichai were used. The Technological Research Sub-Committee decided that the results of these tests should be published in the form of a Technological Bulletin for the benefit of the trade. This has been done in Technological Bulletin, Series A, No. 20, which contains the results of these tests.

Combing of good quality Indian cottons.—My last Progress Report No. 17 contained the details of the proposed work on the combing of good quality Indian cottons which was approved by the Committee at its meeting held on the 13th and 14th July 1931. This work has now been completed on 3 Indian cottons, viz., Punjab-American 289F, Cambodia Co. 1 and 1027 A.L.F., which were combed to the extent of 20 per cent. and 30 per cent. (excepting 1027 A.L.F. for which these percentages were 20 and 26). Yarns were spun both from the carded and the combed slivers on the ordinary system as well on a four roller high draft system. The results of these tests show that using the ordinary system it is possible to obtain very good 60's yarn from 289F, good 50's from Co. 1. and good 44's from 1027 A.L.F. when these cottons are combed to the extent of 20 per cent. and good 70's from 289F, fairly good 60's from Co. 1 and fairly good 50's from 1027 A.L.F. yarns when they are combed to the extent of 30 per cent. (26 per cent. in the case of 1027 A.L.F.). When the high draft system of spinning is used yarns of better quality are obtained, as may be expected. It was further found that the comber waste, when mixed with a suitable cotton, could be utilised for spinning 14/16's warp of fair quality. A number of fibre tests on carded and combed slivers and comber waste have also been made in connection with these tests and the results will be published in the form of a Technological Bulletin.

Tests on mode of ginning in relation to yarn neppiness.—It was mentioned in my last Progress Report that in order to supplement the important work on the relationship between the maturity of cotton hairs and neppiness of yarns spun from a cotton, it was proposed to make spinning tests on roller-ginned and saw-ginned cottons. With the sanction of the Committee one roller gin and saw gin were acquired for the purposes of these tests. These have now been erected and are in good working order. The cottons selected for these tests are as follows :—

List of kapas received for special tests :

1. Gadag I.
2. Jayawant.
3. Banilla.
4. Verum (Nagpur).
5. P. A. 289F.
6. Sind-American 285F.
7. Surat 1027 A.L.F.
8. Cambodia Co. 2.

Sufficient quantities of *kapas* of these cottons of 1931-32 season have been obtained from the Government Agricultural farms and the tests on the relationship between the mode of ginning and yarn neppiness will now be taken in hand as soon as possible.

Standard cottons.—Owing to the lateness of the cotton crop the Standard cottons of this season were received somewhat later than usual. Up to the 31st May, however, all the Standard Cottons except one had been received and are being subjected to the usual tests. The results of these tests will be published as in the past in "Technological Reports on Standard Indian Cottons, 1932" as soon as they are available. It should be mentioned in this connection that, owing to the fact that Dharwar 1 and Cambodia Co. 1 have now been displaced by the improved varieties Jayawant and Cambodia Co. 2 respectively, these cottons have been deleted from the list of all standard cottons and tests on them will not be made in this and the ensuing seasons.

Work on Carding Problems.—It was mentioned by me in my last Progress Report No. 17 that in accordance with the programme of research sanctioned by the Committee, an exhaustive investigation of the carding problems was taken in hand last year. Details of the lines on which this investigation is to be carried out have already been given in the report referred to above. This work has already yielded some very interesting results, but it is felt that the most suitable time for considering them will be when all the results are available, so that the inter-action of the various factors can be discussed simultaneously. The work is in progress.

II. Research Laboratory.

Fibre Testing Section.—Members of the staff deputed to this section have been kept fully occupied in the determination of fibre-properties of the agricultural and other samples received for tests at the Laboratory. In addition to these, numerous tests have been made on card slivers, flat strips, and fly in connection with the work on carding problems and on combed sliver and comber waste in connection with the work on combing of good quality Indian cottons.

Mr. Hari Rao has continued to supervise this section and has in addition been engaged in his research on the effect of twist on the strength and extension of single cotton-hairs. This work is in progress. Mr. Hari Rao has also, in collaboration with Mr. C. Nanjundayya, carried out an investigation on the changes in the weight of loose cotton fibres under different conditions of humidity.

This was made possible by the small new humidifier which was installed in the Laboratory last year and by means of which it was feasible to attain any desired degree of humidity in the experimental room. Accordingly eight standard cottons representing different types were selected for this investigation and the variation in the weight of their fibres was studied at different humidities from 30 per cent. R.H. to 85 per cent. R.H. The results of this investigation are now being analysed and will be published in the form of a Technological Bulletin, when ready.

Physics Section.—In collaboration with Mr. R. P. Richardson, Mr. D. F. Kapadia is carrying on the investigation on the effect on the quality of yarn of different settings of the carding engine to which a reference has been made above.

Mr. R. S. Koshal completed his investigation on the variation of fibre-length, fibre weight and fibre-strength of cotton hairs growing on different regions of the seed. The results of this investigation have been written up in the Technological Bulletin, Series B, No. 14, which has been sent to the Journal of the Textile Institute for publication.

Mr. Srinagabhushana has also completed his investigation on the variation in fibre-rigidity, number of convolutions and ribbon-width of cotton hairs growing on different parts of the seed. Owing to the fact that Mr. Srinagabhushana had to leave the Technological Laboratory to take up his new appointment as Technological Assistant at Surat, he has not yet been able to write up an account of his work. As soon as this account is written up it will also be published in the form of a Technological Bulletin.

Chemistry Section.—The work in connection with the determination of moisture content of samples drawn from fully pressed bales of cotton had claimed part of the time of Mr. D. L. Sen, the Chemist. A report on this work is given below under the heading "Moisture Testing Section". In addition to this Mr. Sen has carried out the chemical analysis of the two halves of the seed, which was made with the object of throwing light on the results of Mr. Sen's previous experiments in which he found that the wax content of the apical fibres was higher than that of the basal fibres, while their ash content was less. It was thought that this may be due to the apical part of the seed containing more wax and less mineral matter than the basal part. The results of the chemical

analysis of the seeds, however, have made the interpretation of the previous results more difficult as it is found that the apical half of the seed contains *less* wax and oil and *more* mineral matter than the basal half. More work in this connection with this problem is necessary before the results of the two series of experiments can be properly understood and mutually reconciled.

It was mentioned in my Progress Report, No. 17, that the work on the spontaneous combustion of cotton would be renewed under a modified scheme. For this new series of experiments a number of small model bales of approximately the same density as the commercial bales were prepared, in some of which the lint was impregnated with water and unsaturated vegetable oils. The presence of water would cause the fermentation of cotton resulting in the liberation of inflammable gases, as had been definitely proved by the previous experiments. The unsaturated oil, on oxidation, would evolve heat and the consequent rise in temperature may be sufficiently high to ignite these gases. It would, therefore, be seen that extremely favourable conditions for spontaneous combustion of cotton were artificially provided in these sample bales. These bales were placed under the direct action of sunlight during the day and a daily record of the maximum temperature was maintained. These bales have now been kept in the open for nearly five months but have so far yielded negative results in as much as none of them has shown any sign of spontaneous ignition.

Mr. C. Nanjundayya.—As mentioned above, Mr. Nanjundayya in collaboration with Mr. Hari Rao, devoted part of the interval under review to a study of the variation in the fibre-weight of loose cotton fibre under different conditions of humidity. He has also tested 3 more cottons in connection with his investigation of the variation in fibre-strength with length grade of the cotton fibre, but further work on this problem has been suspended for the time being in favour of another which is at present engaging the attention of Mr. Nanjundayya and the writer. This refers to a new apparatus which has been designed with the object of determining fibre-length and fibre-weight, and is at present under trial. This investigation is as yet in its initial stages, but it has given very encouraging results. The work is in progress.

Microscopy Section.—Mr. Gulati has completed the redetermination, by the improved method, of the percentage of mature hairs in 31 cottons selected in connection with the problem of relationship of fibre-maturity with yarn-neppiness. This problem has given rise to another, viz., the exact determination of the number of neps in a yarn. The present method of counting the number of neps in a yarn by visual inspection is subject to personal error. As the object of the investigation is to ascertain how far the two quantities are correlated it is necessary that yarn-neppiness should be known with at least as much accuracy as the results of the maturity tests. In order to reduce the personal error to a minimum an apparatus has been designed for the objective measurement of the number of neps in a yarn. While this apparatus is in the course of construction Mr. Gulati is engaged in writing up an account of his work on the maturity of cotton hairs. Mr. Gulati has also carried out a large number of maturity tests on such cottons as Sind-American, Punjab-American, 4-F, etc., which were examined in great detail and which have been referred to above.

III. Moisture Testing Section.

The work done in this section during the period under review resolved itself in the determination of the moisture content of samples drawn from commercial bales as they are ordinarily received for trade purposes in Bombay. The necessity for this work arose owing to the consideration that the previous determinations of moisture content were made on samples drawn from bales which were specially prepared for these tests. While these experiments were absolutely necessary in order to obtain an exact idea of the minimum quantity of water present at different times of the season in bales of different descriptions, it was important to strengthen and supplement them by making tests on ordinary commercial bales. Hitherto 95 samples have been tested in connection with the second series of experiments and their results will be communicated in due course to the East India Cotton Association.

IV. PUBLICATIONS.

The following is the list of the Technological Bulletins and Circulars issued during the period under review :—

(1) Technological Series A, No. 19—"Application of Different Systems of High Draft Spinning to Mixings of Indian Cottons."

(2) Technological Series A, No. 20—"Spinning Tests on Mixings of Long Staple and Short Staple Indian Cottons."

(3) Technological Series B, No. 14—"Variation in the Properties of Cotton Fibre in relation to its position on the surface of the seed" (Sent up for publication).

Technological Circulars.

Cotton.	Technological Circular.	Date od issue.
Dhulia (Khandesh)	60	December 1931
Umri Bani	61	January 1932
Verum 262 (Akola)	62	January 1932
Ujjain Cottons	63	February 1932
Khandesh Cottons	64	February 1932
Verum 262 (Nagpur)	65	February 1932
Punjab-American 289F	66	February 1932
Punjab-American 4F	67	February 1932
Jayawant (Kumpta)	68	April 1932
Broach (Salar), Bailhongal and Hubli-Kumpta	69	May 1932
Jagadia and Kadi	70	May 1932
Hubli-Kumpta and Hubli-Upland ..	71	May 1932
C.P. No. 1, Muttia and Berar ..	72	May 1932
Lattur and Nanded	73	May 1932

V. General.

Mr. R. P. Richardson, Spinning Master, proceeded on short leave, sanctioned by the Standing Finance Sub-Committee, from 4th March 1932 to 29th April 1932. During his absence on leave Mr. D. F. Kapadia officiated as Spinning Master.

On account of the transfer of Mr. Srinagabhushana to his new post at Surat, and the absence of Mr. R. S. Koshal on study leave out of India, Mr. Ram Narayan Mathur, M.Sc., was appointed, with effect from 29th March 1932, a temporary Junior Research Assistant for a period of one year in the first instance. The post had been sanctioned by the Committee at its meeting held on 15th December 1931.

Acknowledgments.

My thanks are due to the members of the staff of the Technological Laboratory for their co-operation and help which made possible the work described in this report.

Director,
Technological Laboratory.

Dated, 15th June 1932.

APPENDIX XIII.

SUBJECT 16.—*Technological Research—Report of the Technological Research Sub-Committee.*

The Progress Report of the Director, Technological Laboratory, for seven months from 1st November 1931 to 31st May 1932 was considered and approved by the Sub-Committee. During the period under review the total number of samples received went up to 301 against 293 received during the corresponding period last year and 189 of them were from the Agricultural Departments. There was, however, a small decrease in the number of samples and the counts actually spun though the number of lots spun was greater than the number in the corresponding period of last year. The tests on Banilla cotton grown on cultivators' fields are being continued for finding out if there is any change in the spinning quality of this cotton. The Sub-Committee considers that the tests on samples of 4-F cotton grown under similar conditions but with different intervals of irrigations are promising and that they should be extended to other cottons. The Sub-Committee is also pleased that in regard to the complaints received from Sind

about the green stains on cotton, the tests at the Technological Laboratory have shown that there is no reduction in the spinning value of the cotton on this account.

The combing experiments on 289-F, Co. 1 and 1027 A. L. F. have been completed and the results show that when 289-F and Co. 1 were combed to the extent of 30 per cent. they could spin up to 70s and 60s respectively on the ordinary system and even higher on a high draft system. Similarly 1027 A. L. F. when combed 26 per cent. could spin up to 50s on ordinary system. The comber wastes when mixed with suitable cottons were good enough for 14/16s warp of fair quality.

2. The Sub-Committee considered the note prepared by the Director, Technological Laboratory, on deterioration of stored cotton and decided that the Director, Technological Laboratory, should be requested to make arrangements to start the work at an early date at Karachi.

3. The Sub-Committee decided that the defective ginning of Sind-American cotton should be brought to the notice of the Sind Cotton Committee.

4. The Sub-Committee confirmed its previous decision that tests on samples submitted by the trade should be limited to such as were of general interest to the cotton trade and the mill industry, and should be done free of cost. Other trade samples might be accepted for tests only if such tests could be done without detriment to the normal activities of the Laboratory, subject to the levy of the following scales of fees :—

	Rs.
For a full test per sample	50
For a fibre and blow-room test per sample	25
For a fibre or yarn test per sample	15

5. The Sub-Committee recommends that an honorarium of Rs. 200 be paid to Mr. Kapadia for discharging the duties of Spinning Master during the absence of Mr. Richardson on leave.

6. The Sub-Committee considered the scheme put up by the Director for giving training to outsiders in Cotton Technology and decided that it should be given a trial with only two students to begin with, preference in selection being on the basis of merit and usefulness to industry. A fee of Rs. 50 was to be charged for the whole course which will normally take six months. It was not necessary to have any additional staff for this purpose.

7. The letter received from the Bombay Millowners' Association to the effect that the proposal to establish a Testing House for Textiles in Bombay has been given up for the present was recorded.

8. The Sub-Committee considered the report on the second series of tests for moisture content on the samples drawn from 82 bales of Indian cotton of different varieties as well as from 9 bales of American cotton and 4 bales of African cotton, as ordinarily received and stored in Bombay. The tests indicate that the average moisture content for most Indian cottons is about 7 per cent. and for American and African cottons slightly higher. It was decided that the report should be sent to the East India Cotton Association and that the experiments might, if found necessary, be continued to supplement the information already collected.

9. The Sub-Committee agreed to the creation of a post of Personal Assistant to the Director for a period of six months, in the first instance, and to its being offered to a member of the staff on the distinct understanding that this temporary appointment does not imply that the post of Assistant Director has been abolished. The post of Personal Assistant would carry a duty allowance of Rs. 50 per mensem only.

10. The Sub-Committee also decided that information not ordinarily published for general information might, at the discretion of the Director, be supplied, marked " confidential ", to those who specially asked for it.

APPENDIX XIV.

SUBJECT 17.—*Report of the Standing Finance Sub-Committee.*

(*a*) Balance Sheet as at March 31st, 1932.
(*b*) Final Accounts—1931-32.
(*c*) Revised Estimates—1932-33.
(*d*) Budget for 1933-34 (Government Servants).

Five meetings of the Sub-Committee were held since the last meeting of the Indian Central Cotton Committee. Sir Joseph Kay and Mr. Vonesch went on leave during the

period under report. The Sub-Committee decided not to fill the vacancy caused by the temporary absence of Sir Joseph Kay but appointed Seth Naranlal Jivanlal during the absence of Mr. Vonesch. Mr. D. McCallum resigned his membership on the Committee and the question of filling his vacancy will be taken up when his successor is appointed. At three of the meetings of the Sub-Committee Dewan Bahadur Sir T. Vijayaraghavacharya was elected Chairman as required by Rule 5 of the Rules under section 16 of the Indian Cotton Cess Act.

2. The Sub-Committee considered the orders of the Government of India that in view of the Committee's grants being treated as receipts of the Provincial Governments and budgeted for as ordinary expenditure of the Departments of Agriculture, the Committee's servants working under the Provincial Governments would not be eligible for admission to the Committee's Provident Fund. The Sub-Committee found no justification for the exclusion of some of its servants from the benefits of the Provident Fund just because they happened to be placed under the administrative control of the Provincial Governments and therefore decided that the Government of India might be requested to alter the Act and the Rules of the Provident Fund to admit them to the Fund.

3. The Committee's servants were hitherto admitted to the Provident Fund only when they were appointed at the commencement of a scheme which was sanctioned for not less than five years, but they were excluded from it if at the time of appointment it was thought that they were not likely to remain in the Committee's service for a minimum period of five years though they might actually continue to serve for a much longer period without a break. To redress this disability the Sub-Committee decided to admit to the Provident Fund every one of the Committee's servants who might wish to join it on the condition that he would be entitled to the Committee's contribution only if he completed five years' service.

4. As per powers delegated by the Committee at its last meeting the Sub-Committee appointed the following members on the Joint Sub-Committee of the Indian Central Cotton Committee and the Imperial Council of Agricultural Research to work out details of investigation into the costs of cultivation of cotton, sugarcane and their rotation crops :—

The President,
The Vice-President,
Sir Purshotamdas Thakurdas,
Rao Bahadur Bhimbhai R. Naik,
Mr. Vonesch,

A representative of the East India Cotton Association (Mr. Haridas Madhawdas since elected by the East India Cotton Association), and

The Secretary.

Owing to the temporary absence on leave of Sir Joseph Kay and Mr. Vonesch their places were filled by Mr. Chunilal B. Mehta and Mr. F. K. Jackson respectively.

5. The full Committee at its meeting in December 1931 accepted the recommendation of this Sub-Committee that the scale of pay of the Cotton Research Botanist, Punjab, should be fixed at Rs. 1,100—50—1,300 with an overseas allowance of £30. The Government of India felt that the scale of pay recommended was too high and suggested that it might be fixed at Rs. 800—40—1,000 with an overseas allowance of £25–30. The Sub-Committee considered that the pay suggested by the Government of India was too low to attract a first rate Botanist and decided to request the Government to agree to the scale recommended by the Committee. The Government of India have since sanctioned the appointment and fixed the scale on Rs. 1,000—50—1,200 with overseas allowance of £30. The post has already been advertised both in England and in India along with the post of the Botanist for the Co-ordination of Cotton Research in the Bombay Presidency.

6. The Sub-Committee decided that, in consideration of the expected fall of about Rs. 1,00,000 in cess returns due to poor crop of cotton and also to the low market value of the securities, the limit of the Committee's overdraft should be raised from Rs. 50,000 to Rs. 1,00,000. This necessitated an amendment of the Indian Cotton Cess Rules which the Government of India sanctioned.

7. It will be remembered that the subject of Publicity and Propaganda was considered at great length by the full Committee at its last meeting when it was decided that a Publicity Officer should be appointed to give wide publicity to the Committee's work. The Sub-Committee accordingly appointed a Selection Sub-Committee consisting of the President, the Vice-President, and Mr. Saklatvala to go into the applications and select a suitable candidate. The Selection Sub-Committee with Mr. Vonesch as an additional member selected Mr. R. D. Mihra for the appointment. Mr. Mihra joined duty on 1st June 1932.

8. The full Committee at its last meeting accepted in principle the scheme submitted by the Director of Agriculture, Baroda, for carrying on comparative tests between 1027 A. L. F. and 1-A cottons at Baroda and as the amount of money asked for was considered inadequate the Director of Agriculture was requested to submit a revised scheme to this Sub-Committee which was authorised to examine the scheme and sanction the amount required. The Sub-Committee accordingly examined the scheme at two of its meetings and sanctioned it for one year at a total cost of Rs. 4,280.

9. The Sub-Committee decided to extend the probation of Mr. P. H. Rama Reddi, Deputy Secretary, by further six months. The Sub-Committee also decided that he should be given the entire responsibility of the work of the meeting of the Agricultural Research Sub-Committee held on the 30th July 1932.

10. The Sub-Committee had under consideration at two of its meetings a complaint that one of the Committee's servants in one province had been replaced by a Government officer who would have been retrenched under the scheme of retrenchment. The information called for from the Director of Agriculture concerned confirmed the allegation and the Sub-Committee decided that the letter to the Director of Agriculture, without mentioning the name of the province, should be circulated to the heads of all Agricultural Departments so that they might avoid similar injustice to the Committee's servants.

11. The Sub-Committee accepted the resignation of Mr. Saklatvala on the Advisory Board of the Imperial Council of Agricultural Research and appointed in his place Rao Bahadur Bhimbhai Ranchodji Naik.

12. At the request of the Indian Lac Cess Committee the Sub-Committee decided to allow Dr. Nazir Ahmad to serve for a period of one year on the Advisory Board of the Lac Cess Committee provided his work at the Laboratory would not suffer and his travelling allowance was paid by the Lac Cess Committee.

13. The subject of the Committee's Provident Fund Rules was discussed by the Sub-Committee in two of its meetings. No provision has been made in the present rules for reserve fund to cover any depreciation that might occur in the value of securities and the people who are likely to suffer the most from depreciation of securities are those who are in the Committee's service at the time of winding up the Provident Fund though it is possible that they might also gain in case of appreciation of the securities. The Sub-Committee after consultation with the Committee's Solicitors decided to revise the Provident Fund Rules so as to incorporate in them provision for establishing reserve fund out of forfeitures and also for annual valuation of the Provident Fund securities for the purpose of making payments to contributors leaving the Committee's service.

14. Under the existing Provident Fund Rules it is obligatory on the part of all the Committee's servants who have been appointed for not less than five years and who draw more than Rs. 30 per month to contribute to the Provident Fund, but no provision was made in favour of menials. The Sub-Committee decided that the menials drawing less than Rs. 30 a month should be given the option to join the Provident Fund.

15. The Special Sub-Committee which was appointed at the last December meeting of the Committee to go into details with the United Provinces Government regarding the extension of the scheme to deal with Pink Boll-worm in the Aligarh District, submitted a report which, together with a letter from the United Provinces Government, was considered by the Sub-Committee. The Sub-Committee was, however, not satisfied with the United Provinces Government's reply and authorised the President to ascertain the definite views of the Government. These have now been received and the whole subject appears as a separate item on the agenda of the Committee.

16. The Sub-Committee considered a letter received from the Chief Agricultural Officer, Sind, stating that the Accountant General, Bombay, had informed him that, since the Committee's servants working under the Bombay Agricultural Department were to be treated from the 1st April 1932 as "new entrants" into the Government service under paragraph 3 of Government Resolution No. 5804, dated 1st December 1931, they were subjected to a reduction of 2 annas in a rupee in their pay in addition to the 10 per cent. emergency cut and that they should cease contributing to the Committee's Provident Fund. The Sub-Committee decided that a strong representation should be made to the Bombay Government to exempt the Committee's servants from the reduction of 2 annas in a rupee. The question of amending the Provident Fund Rules so as to permit temporary Government servants to join the Fund is already under consideration of the Government of India.

17. The Sub-Committee sanctioned leave for six months to Mr. J. H. Ritchie, Secretary, and appointed Mr. P. H. Rama Reddi, Deputy Secretary, to officiate in his place.

18. A Balance Sheet of the Committee's accounts as at March 31st, 1932, is submitted. This shows the income and expenditure under the budget heads from the beginning of the cotton cess, i.e., for nine years, and has been prepared from the audited accounts. A Balance Sheet of the Provident Fund is also submitted.

19. A statement of accounts for the year 1931-32 as audited by the Committee's auditors is submitted. A detailed statement of the Final Accounts is also attached. It will be seen that cotton cess receipts amounted to Rs. 5,65,792-13-1 against a revised estimate of Rs. 6,00,000. Interest on investment came to Rs. 1,64,602-9-6 against Rs. 1,63,000 estimated. The increase of nearly Rs. 5,000 in other receipts is due to the sale of miscellaneous articles and cotton bags received from the United Provinces and to forfeitures of the Provident Fund. Expenditure amounted to Rs. 7,99,873-7-0 against the revised estimate of Rs. 11,00,650-12-0. There were savings under almost every head and they are available for future use if required except under Administration, Technological Laboratory—Working and Research Studentships. The excess expenditure of Rs. 2,336 under "Printing and Propaganda" is due to heavy printing charges incurred as a result of the Committee's scheme of publicity. The excess expenditure can be met from savings under "Administration" and will require the Government of India's sanction. The closing balance on 31st March 1932 was Rs. 30,72,688-1-8 against Rs. 31,33,756-3-8 last year so that the Committee had to spend only Rs. 61,068-2-0 from the reserve.

A statement of the Provident Fund account for 1931-32 is also attached.

20. The Revised Estimates for the current year with actual opening balance are attached and they are subject to alterations recommended by the Agricultural R search Sub-Committee and approved by the Indian Central Cotton Committee. The estimate of cess receipts has been reduced to Rs. 5,00,000 from Rs, 6,00,000 due to trade depression and uncertainty of cotton exports. Interest also has been reduced by Rs. 11,000 as only a part of the sale proceeds of our Sterling Loan which has been disposed of has been reinvested in Rupee loan, the rest being required for the repayment of overdraft and current expenses till the end of December. No alterations have been made on the side of expenditure except increasing the grant under the major head XIV (*b*)—Baroda—to Rs. 4,280 which was sanctioned by the Sub-Committee at its 113th meeting.

21. As required by the Cotton Cess Rules the budget for 1933-34 for the pay of Government officers and other permanent Government servants employed by the Committee is put up for formal sanction.

22. The Sub-Committee also dealt with the Government accounts for 1931-32 for the fumigation of American cotton and its recommendations are dealt with under a separate subject.

23. Arising out of the ruling of the Government of India that grants made by the Committee should be treated as provincial revenues and the consequent alteration of the status of the employees of the Committee in provincial schemes to that of temporary Government servants, the Sub-Committee considered a reference from the Government of India enquiring (1) whether such temporary Government servants would be permitted to subscribe to the contributory Provident Funds of Local Governments where such existed instead of to the Committee's Provident Fund, and (2) in the event of temporary Government servants employed in the Committee's schemes being made permanent before completing five years' service how the Committee's contributions to their account would be treated. The Sub-Committee decided (1) to permit temporary Government servants to subscribe to the contributory Provident Funds of Local Governments and also (2) to give them the benefit of the Committee's contributions should they be made permanent before completion of five years in the Committee's service.

24. The Sub-Committee also considered a resolution moved by Rao Bahadur M. G. Deshpande that the cotton cess should be reduced from annas 2 to anna 1 on a 400 lb. bale of cotton. The Sub-Committee was of opinion that any benefit which the grower might derive from the reduction in the cess was quite incommensurate with the loss the Committee would suffer by the limitation of its research and seed distribution schemes and in view of this opinion Rao Bahadur Deshpande withdrew his resolution with the permission of the Chairman.

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BALANCE SHEET AS AT 31st MARCH 1932.

Balance Sheet as at 31st March 1932.

Receipts.

	Rs. a. p.	Rs. a. p.
Cotton Cess Receipts ..	....	80,28,627 15 9
Interest account—		
Amount received on investment	10,50,348 6 7	
Add—Refund of Income-tax deducted on interest ..	15,215 9 0	
	10,65,563 15 7	
Less—		
Interest paid in advance at the time of purchasing Government Paper (since recovered) and Banks' commission for collection of interest ..	40,382 12 9	
Income-tax deducted on interest	17,640 2 6	
Interest credited to Provident Fund account ..	4,886 6 2	
Bank's withdrawal charges for securities sold ..	1,690 8 0	
Provision for sinking fund ..	2,675 9 0	
	67,275 6 5	9,98,288 9 2

Expenditure and Investments.

	Rs. a. p.	Rs. a. p.
I. A. Administration ..		11,95,707 3 6
B. Improvement of Cotton Marketing .		73,244 1 1
C. *Seed Distribution and Extension Schemes :*—		
(1) *Bombay*—		
(*i*) Hubli ..	13,330 6 0	
(*ii*) Gadag ..	21,075 13 9	
(*iii*) Khandesh ..	23,250 4 0	
(*iv*) Surat ..	13,377 1 6	
(2) Madras ..	3,060 0 0	
(3) Lyallpur Ginnery .	18,125 0 0	
(4) Sind ..	24,880 2 0	
(5) Hyderabad ..	8,065 14 3	
(6) Central Provinces .	43,416 2 6	
		1,68,580 12 0
D. Printing and Propaganda		9,536 0 0
II. *Technological Research.*		
(1) *Technological Laboratory.*		
A. Capital Expenditure :—		
(*i*) Lands and Buildings.	3,55,797 9 11	
(*ii*) Machinery ..	83,977 6 1	
(*iii*) Freight ..	7,502 2 8	
(*iv*) Apparatus and Equipment ..	41,558 3 7	
(*v*) Machinery Workshop	5,789 8 3	
B. Working Expenses ..	10,63,658 5 10	
(2) Provincial ..	27,350 8 9	
		15,85,633 13 1
III. Research Studentships .		1,94,742 10 9
Agriculture Research Grants.		
IV. *Bombay* :—		
(*a*) Surat Physiological ..	2,25,077 13 9	

Profit on conversion of 6 per cent. Tax free Bonds into 5 per cent. Taxable loan ..	5,000	0	0
Sinking Fund Account ..	2,675	9	0
Miscellaneous Receipts ..	14,71½	15	5
Refund from Provident Fund account for contributions disallowed to subscribers resigned.	3,046	9	5
Suspense receipts ..	9	3	0
Grand Total ..	90,52,360	13	9

	(b) (i) Surat Bollworm ..	1,14,500	9	7	
	(ii) Surat Bollworm Propaganda ..	29,000	12	0	
	(c) Dharwar Wilt ..	1,79,931	5	7	
	(d) Khandesh ..	26,384	6	0	
	(e) Co-ordination of cotton research ..	314	4	0	
V.	*Madras* :—				
	(a) Herbeucam ..	85,516	4	5	
	(b) Pempheres and Physiological ..	15,209	10	10	
	(c) Fodder Cholam ..	3,019	10	0	
VI.	*Punjab* :—				
	(a) Botanical ..	3,52,494	6	5	
	(b) Entomological ..	95,772	14	1	
	(c) White Fly ..	8,728	10	0	
VII.	Central Provinces ..	2,44,194	12	1	
VIII.	United Provinces ..	1,33,060	0	3	
IX.	Institute of Plant Industry, Indore ..	10,29,676	12	0	
X.	Sind ..	1,09,044	7	1	
XI.	*Burma* :—				
	(a) Capital ..	2,906	15	5	
	(b) Cotton Improvement ..	4,074	12	0	
XII.	*Hyderabad* :—				
	(1) Botanical ..	66,625	10	2	
	(2) Cotton Survey ..	3,591	11	0	
XIII.	Bikaner ..	19,881	0	0	
XIV.	Baroda—Root Rot ..	3,212	0	0	
					27,52,228 3 8
XV.	Loans recoverable (but considered doubtful).				12,805 0 0
	Suspense account ..				63 11 2
	By Balance ..				30,59,819 6 6
	Grand Total ..				90,52,360 13 9

Balance Sheet as at 31st March 1932.

Provident Fund Account.

Receipts.	Rs. a. p.	Rs. a. p.
Subscribers' contributions ..	95,990 7 3	
Less—Refunds to subscribers ..	28,964 7 2	
		67,026 0 1
Committee's contributions ..	93,753 9 0	
Less—Payments to subscribers resigned	27,103 6 6	
		66,650 2 6
Recoveries against advances ..		15,498 10 0
Suspense deposit of Mr. Dutt's contributions		882 9 7
Total ..		1,50,057 6 2
Deductions—		
(1) Advances made ..	17,734 7 0	
(2) Accrued interest credited to subscribers on 31st March 1932	1,718 8 6	
		19,452 15 6
Grand Total ..		1,30,604 6 8

Investments.	Face Value.	Cost.
	Rs.	Rs. a. p.
3½ per cent. G. P. Notes ..	85,600	59,754 3 1
5 per cent. 1939–44 Taxable loan ..	25,600	24,606 15 6
6 per cent. 1933–36 Taxable loan ..	29,900	30,025 2 0
4 per cent. 1934–37 Taxable loan ..	2,000	1,795 0 0
Balance in current account with the Imperial Bank of India, Bombay		14,423 2 1
Grand Total ...		1,30,604 6 8

STATEMENT OF RECEIPTS AND PAYMENTS FOR THE YEAR ENDED 31st MARCH 1932.

Statement of Receipts and Payments for the year ended 31st March 1932.

Receipts.	Rs.	a.	p.
*Opening Balance	31,33,756	3	8
Receipts under Section 12 of the Indian Cotton Cess Act, 1923	5,65,792	13	1
†Other Receipts	8,409	14	5
Interest on Investments	1,64,602	9	6

Payments.	Face Value. Rs.	Rs.	a.	p.	Rs.	a.	p.
Administration of the Committee (including Improvement of Cotton Marketing, Seed Distribution and Extension and Printing and Propaganda) ..					2,71,400	5	9
Agricultural Research Grants-in-Aid					3,75,333	9	3
Technological Research ..					1,53,130	8	0
Closing Balance (Government Paper at Cost).							
3½ per cent. Government Promissory Notes ..	7,56,300	5,39,864	6	5			
5 per cent. Ten Year Bonds 1935 ..	2,75,000	2,40,032	13	0			
5 per cent. Indian War Loan 1929-47 ..	7,88,000	7,65,220	12	10			
4½ per cent. Govt. of India Loan 1955-60 ..	26,600	25,004	0	0			
5 per cent. Govt. of India Loan 1939-44 ..	3,09,000	2,96,679	13	6			
6 per cent. Govt. of India Loan 1933-36 ..	1,16,900	1,16,930	0	0			
‡6 per cent. Bombay Municipal Debentures 1954 ..	50,000	56,500	0	0			
6 per cent. Rangoon Municipal Coupon Debentures 1955 ..	3,83,500	4,15,328	2	6			

				6 per cent. Karachi Port Trust Coupon Debentures 1956 ..	1,30,000	1,41,212	8	0
				4½ per cent. India Sterling Stock 1950–55 Bearer ..	£ 16,000	1,95,621	14	4
				4½ per cent. India Sterling Stock 1958–68 Bearer ..	8,000	93,762	12	6
				3½ per cent. India Sterling Loan 1931 Bearer ..	16,000	1,28,579	12	8
				(Market Value on 31st March 1932 Rs. 27,90,712-10-0.)		30,14,736	15	3
				3 Months Govt. Treasury Bills ..	Rs. 25,000	24,656	4	0
				Call Deposit (with approved Banks).		13,000	0	0
				Imperial Bank of India, Ltd.—Current Account ..		4,922	3	3
				Imprest.—Committee's Account as certified by the Secretary ..	1,504			
				Imprest.—Technological Laboratory as certified by the D. T. L. ..	500			
Carried forward ..	38,72,561	8	8	Carried forward ..	2,004	30,57,315	6	6	7,99,873	7	0

* Includes Rs. 1,735-7-0 on account of Sinking Fund and Rs. 12,805 against Loans recoverable from Hubli and Gadag.

† Includes Rs. 940-2-0 against Provision for Sinking Fund for the year 1931-32 and Rs. 3,046-9-5 being Committee's Contributions disallowed to Subscribers.

‡ Deposited with the Imperial Bank of India, Ltd., for security against any overdraft that may be required by the Committee.

Statement of Receipts and Payments for the year ended 31st March 1932—contd.

Receipts.	Rs. a. p.
Brought forward ..	38,72,561 8 8
Total ..	38,72,561 8 8

Payments.	Rs.	Rs. a. p.	Rs. a. p.
Brought forward ..	2,004	30,57,315 6 6	7,99,873 7 0
Imprest.—Cotton Research Botanist's Office, Punjab, as certified by the Cotton Research Botanist, Punjab.	500		
		2,504 0 0	
Suspense (Recoverable) ..		63 11 2	
Loans Recoverable (but considered doubtful) ..		12,805 0 0	
*Total Closing Balance..			30,72,688 1 8
Total ..			38,72,561 8 8

*This amount includes Rs. 2,675-9-0 on account of Provision for Sinking Fund.

We have examined the above Statement of Receipts and Payments of the Indian Central Cotton Committee with the Books, Vouchers and Certified Returns of the Committee, have obtained all the information and explanations we have required, and certify that to the best of our information and explanations received the above Statement is a correct abstract of the figures appearing in the Books and is drawn up in conformity with the Rules under the Indian Cotton Cess Act, 1923.

Bombay, 6th April 1932.

(Signed) S. B. Billimoria & Co.,
Auditors.

PROVIDENT FUND ACCOUNT AS ON 31st MARCH 1932.

Provident Fund Account as on 31st March 1932.

	Rs.	a.	p.	Rs.	a.	p.
To Opening Balance as on 1st April 1931.	1,34,415	5	0			
Less—Refunds to the Director of Agriculture, Bombay, for Excess Receipt..	5	13	0			
	1,34,409	8	0			
Subscribers' contributions .. 19,492 2 0						
Add—Recoveries against advances .. 6,712 7 0						
	26,204	9	0			
	1,60,614	1	0			
Less—Refunds to Subscribers .. 25,190 8 9						
Amount transferred to Suspense Deposit (Mr. Dutt's contributions) .. 864 9 7						
Advances to subscribers. 3,331 11 0						
	29,386	13	4			
	1,31,227	3	8			
Committee's contributions, received from Indian Central Cotton Committee at 100 per cent. ..	19,492	2	0			
	1,50,719	5	8			
Less—Refunds to Subscribers who have resigned and Refunds to Indian Central Cotton Committee on account of Committee's Contribution disallowed to subscribers resigned ..	26,538	9	3			
				1,24,180	12	5

	Rs.	a.	p.	Rs.	a.	p.
By Balance—						
Face Value.						
(Government Paper at cost).	Rs.					
3½ per cent. Government Promissory Notes ..	85,600	59,754	3	1		
5 per cent. Taxable Loan 1939/44 ..	25,600	24,606	15	6		
6 per cent. Government Bonds 1933/36 ..	29,900	30,025	2	0		
4 per cent. Government Loan 1934/37 ..	2,000	1,795	0	0		
		1,16,181	4	7		
(Market value on 31st March 1932—Rs. 1,07,198-0-0)						
Balance in current account with the Imperial Bank of India, Ltd. ..		14,423	2	1		
					1,30,604	6	8

Interest received on Investments ..		6,868 1 2	
Interest received on Advances to subscribers ..		129 0 4	
Refund of Income-tax deducted from interest received during 1930-31 ..		95 11 0	
		7,092 12 6	
Less—Interest paid during the year to subscribers who have resigned :—			
	Rs. a. p.		
On their own contributions ..	572 9 10		
On Committee's contributions ..	553 5 8		
	1,125 15 6		
Advance interest paid for Securities purchased (since recovered) ..	139 4 9		
Income-tax deducted from interest on Government Paper (recoverable) ..	76 0 7		
Bank's commission for collection of interest .	16 5 0		
Bank's withdrawal charges ..	171 10 0		
Cost of Stationery ..	22 8 0		
		1,551 11 10	
			5,541 0 8
Suspense Deposit— (Mr. Dutt's own contributions with interest) ..			882 9 7
Total ..			1,30,604 6 8

Total .. 1,30,604 6 8

Examined and found correct.

(Signed) S. B. BILLIMORIA & Co.,
Auditors.

Bombay, 6th April 1932.

RECEIPTS.	Rs.	a.	p.
To Opening Balance as on 1st April 1931 ..	31,19,215	12	8
To Loans Recoverable Account ..	12,805	0	0
To Sinking Fund Account..	1,735	7	0
	31,33,756	3	8
Cotton Cess Receipts ..	5,65,792	13	1
Interest Account ..	1,64,602	9	6
Other Receipts ..	7,469	12	5
Sinking Fund provision for long dated gilt-edged securities	940	2	0

EXPENDITURE.		Sanctioned Budget.			Actual Expenditure.			Savings (+), Deficit (−).		
		Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.
I. A. Administration		1,57,510	0	0	1,31,002	1	9	26,507	14	3
B. Improvement of Cotton Marketing ..		5,000	0	0	3,040	8	3	1,959	7	9
C. Seed Distribution and Extension Schemes—										
(1) Bombay—										
	Rs.									
(*i*) Hubli ..	8,560				6,904	9	0	*1,655	7	0
(*ii*) Gadag ..	9,240				5,536	10	6	*3,703	5	6
(*iii*) Gadag Supplementary ..	7,612				7,275	0	0	*337	0	0
(*iv*) Haveri ..	6,238				....			6,238	0	0
(*v*) Athani ..	4,238				....			4,238	0	0
(*vi*) Bailhongal ..	4,285				....			4,285	0	0
(*vii*) Surat ..	7,000				6,377	1	6	*622	14	6
(*viii*) Khandesh ..	62,068				23,250	4	0	*38,817	12	0
(2) Madras	3,300				3,060	0	0	*240	0	0
(3) Punjab—										
Lyallpur Ginnery ..	18,125				18,125	0	0	....		
(4) Sind	31,000				24,880	2	0	*6,119	14	0
(5) Hyderabad State ..	5,000				3,065	14	3	*1,934	1	9
(6) Central Provinces and Berar ..	34,518	2,01,184	0	0	29,356	2	6	5,161	13	6
D. Printing and Propaganda.		7,200	0	0	9,536	0	0	—2,336	0	0

II.	Technological Research—									
	(1) Technological Laboratory—									
	A. Capital Expenditure	1,636	12	0	1,636	12	0	....		
	B. Working Expenses	1,91,909	0	0	1,42,569	11	3	49,339	4	9
	(2) Provincial	12,648	0	0	8,924	0	9	3,723	15	3
III.	Research Studentships	40,000	0	0	9,323	7	6	30,676	8	6
	Agricultural Research Grants.									
IV.	Bombay—									
	(a) Surat Physiological	33,630	0	0	28,024	4	11	5,605	11	1
	(b) Surat Earjas Boll-worm—Propaganda	31,480	0	0	29,000	12	0	*2,479	4	0
	(c) Dharwar Wilt	25,085	0	0	20,380	2	0	4,704	14	0
	(d) Khandesh Cotton Breeding ..	5,768	0	0	4,919	3	0	848	13	0
	(e) Co-ordination of Cotton Research ..	19,731	0	0	....			19,731	0	0
V.	Madras—									
	(a) Herbaceum	9,011	0	0	9,010	15	6	0	0	6
	(b) Pempheres and Physiological ..	22,400	0	0	12,984	14	3	*9,415	1	9
	(c) Fodder Cholam—									
	Recurring	1,760	0	0	1,753	1	0	*6	15	0
	Non-recurring	40	0	0	11	9	0	28	7	0
VI.	Punjab—									
	(a) Botanical—Working Expenses ..	58,180	0	0	49,174	3	1	*9,005	12	11
	(b) Entomological	18,500	0	0	14,033	9	9	*4,466	6	3
	(c) White Fly	11,360	0	0	8,728	10	0	*2,631	6	0
VII.	Central Provinces	44,619	0	0	30,970	12	9	*13,648	3	3
	Carried over ..	8,98,651	12	0	6,42,855	6	6	2,55,796	5	6

Carried over .. 38,72,561 8 8

RECEIPTS.		EXPENDITURE.	Sanctioned Budget.	Actual Expenditure.	Savings (+), Deficit (−).
	Rs. a. p.		Rs. a. p.	Rs. a. p.	Rs. a. p.
Brought forward ..	38,72,561 8 8	Brought forward ..	8,98,651 12 0	6,42,855 6 6	2,55,796 5 6
		VIII. United Provinces—Recurring grant for staff	7,206 0 0	6,937 3 0	*268 13 0
		IX. Institute of Plant Industry, Indore ..	1,15,000 0 0	85,000 0 0	*30,000 0 0
		X. Sind	27,492 0 0	27,262 10 10	*229 5 2
		XI. Burma Cotton Improvement ..	4,104 0 0	4,074 12 0	*29 4 0
		XII. Hyderabad—			
		(*a*) Botanical	26,300 0 0	24,880 8 9	*1,419 7 3
		(*b*) Cotton Survey	5,000 0 0	3,591 11 0	*1,408 5 0
		XIII. Bikaner—Working Expenses ..	7,640 0 0	3,271 0 0	*4,369 0 0
		XIV. Baroda—Root Rot	9,257 0 0	3,212 0 0	*6,045 0 0
		Total Expenditure ..	11,00,650 12 0	8,01,085 4 1	2,99,565 7 11

Less—Boll-worm (Surat) unexpended balance returned by the Director of Agriculture, Bombay Presidency ..	— 1,211 13 1	+ 1,211 13 1	
	7,99,873 7 0	3,00,777 5	
XV. Loans recoverable (but considered doubtful)—			
	Rs. a. p.		
1. Hubli ..	5,513 0 0		
2. Gadag ..	7,292 0 0		
	12,805 0 0		
By Balance	30,59,883 1 8		
Grand Total ..	38,72,561 8 8		
Grand Total — 38,72,561 8 8			

* Available for future expenditure.

Final Accounts, 1931-32.

(*Provident Fund Account.*)

RECEIPTS.						EXPENDITURE.					
	Rs.	a.	Rs.	a.	p.		Rs.	a.	p.		
To Opening Balance ..	1,34,415	5				By refunds to subscribers resigned for their own contributions with interest ..	26,055	2	4		
Less — Refunds to the Director of Agriculture, Bombay Presidency, for excess payment ..	5	13				Payment to subscribers of the Committee's contributions including forfeitures refunded to the Committee ..	26,538	9	3		
			— 1,34,409	8	0						
Subscribers' contributions account ..			19,492	2	0	Advances made ..	3,331	11	0		
						By Balance ..	1,30,604	6	8		
Committee's contributions account ..			19,492	2	0						
Recoveries against advances ..			6,712	7	0						
Interest (net) received ..			5,541	0	8						
Suspense deposit of Mr. H. N. Dutt's contributions with interest			882	9	7						
Grand Total ..			1,86,529	13	3	Grand Total ..	1,86,529	13	3		

REVISED ESTIMATES, 1932-33—ALL HEADS.

Revised Estimates, 1932-33—All Heads.

(As passed by the Indian Central Cotton Committee on the 2nd August 1932.)

RECEIPTS

	Rs.	a.	p.	Rs.	a.	p.
To Opening Balance..	30,59,883	1	8			
Loans recoverable account ..	12,805	0	0			
				30,72,688	1	8*
Cotton cess receipts ..				5,00,000	0	0
Interest account ..				1,52,000	0	0
Miscellaneous receipts,				1,500	0	0

*(Audited closing balance 1931-32).

EXPENDITURE.

		Rs.	a.	p.	Rs.	a.	p.
I.	A. Administration				1,52,410	0	0
	B. Improvement of Cotton Marketing ..				15,000	0	0
	C. *Seed Distribution and Extension Schemes*—						
	(1) *Bombay*—						
	(i) Hubli	8,560	0	0			
	(ii) Gadag	9,240	0	0			
	(iii) Gadag Supplementary ..	4,612	0	0			
	(iv) Haveri	2,800	0	0			
	(v) Athani	2,980	0	0			
	(vi) Bailhongal	4,285	0	0			
	(vii) Surat	7,800	0	0			
	(viii) Khandesh	52,068	0	0			
	(2) *Madras Presidency*—						
	(i) Pay and allowances of Business Manager, Tiruppur ..	3,300	0	0			
	(ii) Co. 2	4,790	0	0			
	(iii) H. 1	....					
	(3) Sind	31,000	0	0			
	(4) Hyderabad State	5,000	0	0			
	(5) Central Provinces	33,015	4	0			
					1,69,450	4	0

ROYAL ASIATIC SOCIETY. LIBRARY OF THE BOMBAY BRANCH OF THE

	D. *Printing and Propaganda*—				
	(*a*) Publicity and Propaganda			19,341	0 0
	(*b*) Printing and Distribution of Publications.			11,000	0 0
II.	*Technological Research*—				
	(1) Technological Laboratory—Working expenses			1,57,447	0 0
	(2) Provincial			12,275	0 0
III.	Research Studentships			20,000	0 0
	AGRICULTURAL RESEARCH GRANTS.				
IV.	*Bombay*—				
	(*a*) Surat Physiological	21,113	0 0		
	(*b*) *Surat Boll-worm*—				
	(*i*) Writing-up Scheme ..	2,420	0 0		
	(*ii*) Propaganda	31,610 / 20,000	0 0 / 0 0		
	(*c*) *Dhanwar*—				
	(*i*) Wilt Scheme	2,000	0 0		
	(*ii*) Writing-up Scheme ..	9,503	0 0		
	(*d*) (*i*) Broach Cotton Breeding Scheme	9,250	0 0		
	(*ii*) Jalgaon do. ..	8,318	0 0		
	(*e*) Co-ordination of Cotton Research ..	23,991	0 0		
V.	*Madras*—				
	(*a*) Herbaceum	9,200	0 0		
	(*b*) Pemphores and Physiological ..	22,400	0 0		
	(*c*) Fodder Cholam—Recurring ..	1,644	0 0		
	Carried over ..	1,61,449	0 0	5,56,923	4 0

RECEIPTS.	Rs.	a.	p.	EXPENDITURE.	Rs.	a.	p.	Rs.	a.	p.
Brought forward ..	37,26,188	1	8	Brought forward ..	1,61,449	0	0	5,56,923	4	0
				VI. *Punjab*—						
				(*a*) Botanical—Working Expenses ..	58,590	0	0			
				(*b*) Ehtomological	18,500	0	0			
				(*c*) White Fly	11,140	0	0			
				(*d*) Root Rot	1,795	0	0			
				(*e*) Spraying trials	3,250	0	0			
				VII. Central Provinces	46,119	0	0			
				VIII. United Provinces—Recurring grant for staff	6,931	0	0			
				IX. Institute of Plant Industry, Indore ..	1,00,000	0	0			
				X. Sind	27,777	0	0			
				XI. Burma Cotton Improvement	6,408	0	0			
				XII. *Hyderabad*—						
				(*a*) Botanical	26,462	0	0			
				(*b*) Cotton Survey	6,560	0	0			
				XIII. Bikaner	7,640	0	0			
				XIV. *Baroda*—						
				(*a*) Root Rot	8,860	0	0			
				(*b*) Comparative tests of 1027 and 1A cottons	4,280	0	0	4,95,671	0	0
				Total Expenditure ..				10,52,594	4	0

CLOSING BALANCE.

XV. Loans recoverable (but considered doubtful)—

		Rs.	a.	p.					
Hubli	..	10,513	0	0					
Less—instalment received	..	2,449	6	9	8,063	9	3		
Gadag	...				7,292	0	0		
								15,355	9	3
By balance	..	..						26,58,238	4	5	26,73,593	13	8

Grand Total	...	37,26,188	1	8	Grand Total	..	37,26,188	1	8

Revised Estimates, 1932-33.

Provident Fund Account.

RECEIPTS.					EXPENDITURE.			
	Rs.	Rs.	a.	p.		Rs.	a.	p.
To Opening Balance ..		1,30,604	6	8	By Balance ..	1,76,340	3	8
Subscribers' contribution.	18,500							
Committee's contribution.	18,500							
		37,000	0	0				
Recoveries against advances		2,235	13	0				
Interest receivable ..		6,500	0	0				
Total ..		1,76,340	3	8	Total ..	1,76,340	3	8

Budget for 1933-34 for pay and allowances of Government servants lent to the Indian Central Cotton Committee.

34-A—AGRICULTURE.

INDIAN CENTRAL COTTON COMMITTEE.

BUDGET ESTIMATES FOR 1933-34.

No.	Minor and detailed heads.	Amount of provision.
	Non-voted.	Rs.
1	Salary—Secretary—Rs. 2,000—50—2,250 and Overseas pay at £13-6-8	29,087
	Less 10 per cent. cut from pay for March 1933 ..	—238
1	Salary—Deputy Secretary—Rs. 350—1,250, Overseas pay Rs. 300 and Special pay Rs. 250	18,074
	Less 10 per cent. cut from pay for March 1933 ..	—150
	Leave salary	....
	Voted.	
	PAY OF ESTABLISHMENT.	
5	Superintendent and Clerks (at rates varying from Rs. 70 to Rs. 750)	20,861
	Less 10 per cent. cut from pay for March 1933 ..	—167
	Leave salary—Establishment	1,600
	ALLOWANCES, HONORARIA, ETC.	
	Non-voted.	
	House rent and other allowances	6,000
	Travelling allowance of officers	5,000
	Voted.	
	Travelling allowance of Establishment	300
	Total { Non-voted ..	57,773
	Total { Voted ..	22,594
	Grand Total ..	80,367
	Deduct—Recoveries from the Committee	78,767
	Nett—Leave salary of Establishment paid by Government ..	1,600

Statement showing the details of the provision for establishment of the office of the Secretary, Indian Central Cotton Committee, for the year 1933-34.

Details of appointment.	Sanctioned scale of pay.	Actual pay on 1st April 1933.	Amount of provision.	Remarks.
1. Superintendent ..	450—20—550—25—750	675	8,075	
2. Statistical Assistant ..	300—20—500	500	5,980	
3. First Assistant ..	200—10—300	270	3,230	
4. Upper Division Clerk ..	110—5—150—10—230	180	2,260	Draws Rs. 190 from 1st May 1933.
5. General Clerk ..	70—4—130	110	1,316	
			20,861	
Less 10 per cent. cut on pay for March 1933 ..			—167	
			20,694	

APPENDIX XV.

SUBJECT 18—*Agricultural Research—General Progress Report.*

During the year under report, the Indian Central Cotton Committee provided funds for 22 Agricultural Research Schemes and 12 Seed Distribution and Extension Schemes.

AGRICULTURAL RESEARCH SCHEMES.

1. *Scheme for the Co-ordination of Cotton Research in the Bombay Presidency* has been held up owing to the difficulty of obtaining a Botanist with the requisite qualifications but it is hoped this appointment will soon be filled.

2. *Surat Boll-worm Scheme.*—This scheme came to an end in March 1931 and at its last meeting, the Committee sanctioned a grant of Rs. 2,420 for writing up the results of the research. The report will be available for consideration at the next meeting of the Committee.

3. *Broach and Jalgaon Cotton Breeding Schemes.*—These two schemes which were sanctioned by the Committee at its meeting held in December 1931 have started work very recently and there is nothing to report on them.

4. *The United Provinces Entomological Research Scheme* closed down in July 1931 and at its last meeting the Committee sanctioned an extension for one year of the services of Mr. H. D. Nangpal to carry out certain work on the Pink Boll-worm which had not yet been completed and to help Mr. Richards to prepare the results of the investigation for publication.

5. *Scheme for comparative tests of 1027 and 1A cottons in Baroda.*—As per power delegated by the Committee at its last meeting, the Standing Finance Sub-Committee approved of the revised scheme at a cost of Rs. 4,280. The work commenced very recently and there is practically nothing to report.

The remaining 17 schemes detailed below are dealt with under separate subjects noted against them on the agenda of the Committee and require no comment here :—

		Subject No.
6.	Surat Physiological Scheme	19
7.	Surat Boll-worm Propaganda Scheme	20
8.	Dharwar Cotton Wilt Research Scheme	21
9.	Sind Physiological Research Scheme	23
10.	Madras Herbaceum Research Scheme	24
11.	Madras Pempheres and Physiological Research Scheme	25
12.	Madras Fodder Cholam Scheme	26
13.	Punjab Botanical Research Scheme	27
14.	Punjab Entomological Research Scheme	28
15.	Punjab Cotton White Fly Scheme	29
16.	Central Provinces Botanical Research Scheme ..	30
17.	Institute of Plant Industry, Indore	31
18.	Burma Cotton Improvement Scheme	32
19.	Hyderabad Botanical Research Scheme	33
20.	Hyderabad Cotton Survey Scheme	34
21.	Bikaner Gang Canal Scheme	35
22.	Baroda-Root Rot Scheme	36

It will be seen that out of the above 22 research schemes, three schemes, viz., Dharwar Cotton Wilt, Surat Boll-worm and the United Provinces Entomological Schemes, have closed down and the Committee has provided funds only for the writing up the results of their research. The Khandesh Cotton Breeding Scheme also closed down very recently. So that six schemes in all have been wound up since the Committee started including the Central Provinces Mycological and Dharwar-American Cotton Breeding Schemes already reported.

SEED DISTRIBUTION AND EXTENSION SCHEMES.

Out of the 12 schemes only ten were in operation during the year. The remaining two, the Haveri and Bailhongal Schemes have not started work. Progress reports

on 9 of these schemes have been received and will be found under separate subjects on the agenda of the Committee as detailed below :—

		Subject No.
1.	Hubli Scheme	37
2.	Gadag (Extension) and	
3.	Gadag (Supplementary) Schemes	38
4.	Khandesh (Banilla) Scheme	39
5.	Surat Scheme	40
6.	Sind Scheme	41
7.	Madras Scheme	42
8.	Hyderabad Scheme	43
9.	Central Provinces Scheme	44

10. *The Athani Seed Distribution and Extension Scheme* as finally sanctioned at the last meeting of the Committee has started work very recently and there is nothing to report.

A short report on the scheme for the erection of a small ginnery at Lyallpur for which the Committee sanctioned funds at its July 1930 meeting has been received and will be found under subject 45 of the agenda.

The total grant for the 34 schemes sanctioned in the current year's budget amounts to Rs. 6,27,952.

APPENDIX XVI.

SUBJECT 46—*Report of the Agricultural Research Sub-Committee.*

A. REPORT OF THE AGRICULTURAL RESEARCH SUB-COMMITTEE ON PROGRESS REPORTS AND GENERAL ITEMS.

The Agricultural Research Sub-Committee considered the progress reports for 1931-32 and the programmes of work for 1932-33 of the following Research Schemes received from the Officers in charge :—

Bombay Presidency.

1. *Surat Physiological Scheme.*—The work carried out during the year was largely a repetition of what was done in the last year and the results obtained only confirm the previous results. As decided by the Indian Central Cotton Committee at its meeting in July 1931 the scheme was closed down at the end of the cotton season this year and the year 1932-33 is to be utilised for writing up the results of the research work. The Agricultural Research Sub-Committee approves of the outline for the "Monograph on Studies in the Physiology of the Cotton Plant" under which title the Cotton Physiologist proposes to publish the results of the whole scheme and recommends that mention should be made in the monograph of the extent to which the cultivator is benefitted by these results.

2. *Surat Boll-worm-Propaganda-Scheme* which was sanctioned for one year in the first instance commenced work in April 1931 and it has since been extended for another year. The scheme aims at bringing home to the cultivators of the three Talukas, Broach, Amod and Vagra of Broach district, by intensive propaganda, the necessity for a "Close" period between the harvest of one crop and the sowing of the next crop by removing from the fields the cotton stubbles which are mainly responsible for the carry-over of the pest from one season to another. The Sub-Committee approves the progress report and the work forecasted for the next year.

3. The *Khandesh Cotton Breeding Scheme* came to an end in March 1932 as approved by the Indian Central Cotton Committee at its meeting in July 1931. The object of the scheme was to give a thorough test both on the Government Farms and in villages to Banilla cotton about the yield of which there was some doubt. The comparative tests show that it is at least as good a yielder as Farm N. R. under normal agricultural conditions and it has extended over a lakh of acres against 40 acres in 1926 when the scheme was first started. Banilla is, however, susceptible to wilt and it has also deteriorated in spinning quality during the past few years. Some new promising strains have been obtained and they will be tested hereafter at Jalgaon.

4. The *Scheme for the Co-ordination of Cotton Research in Bombay Presidency* still is in abeyance for want of an officer with requisite qualifications. The post has been advertised both in England and in India on an attractive scale of Rs. 1,000—50—1,200 with an overseas allowance of £30 which is to be given only to officers of non-Asiatic domicile and the Sub-Committee recommends that a Selection Sub-Committee be appointed to examine the applications and select a suitable candidate.

Punjab.

5. The *Botanical Research Scheme* has now completed its second year of the five years' extension from April 1930. The scheme has been in charge of Mr. Mohammad Afzal since July 1931 when Mr. Trought left the Committee's service and the work was carried on during the year on lines laid down by the latter. Efforts are being made to multiply as quickly as possible an early strain which has shown satisfactory resistance to Jassids. The programme of work for 1932-33 requires no comment as it is only an extension of the work done so far.

6. The *Punjab Entomological (Pink Boll-worm) Research Scheme* was reviewed in December 1930 and extended for a further period of two years. The object of the scheme when it commenced in 1926 was to ascertain the causes for the difference in the incidence of the Pink Boll-worm between the south-east of the Punjab and the Canal Colonies. The work of the first five years has shown that the difference in distribution was mainly controlled by temperature and the results of the last year show that, in addition, both fecundity and oviposition are considerably reduced by the higher temperatures of the Canal Colonies. The Sub-Committee has approved the programme for 1932-33 at the end of which the scheme would come to a close unless it is further extended.

7. The *Punjab White Fly Scheme* which was sanctioned in December 1930 for a period of three years has now completed its 1st year and the results so far obtained are encouraging. The Sub-Committee approves the progress report and the programme of work.

Madras.

8. The *Madras Herbaceum Research Scheme* was started in 1923 with the object of selecting a few strains from local Uppam (G. Herbaceum) equal to Karunganni (G. indicum) in yield and spinning value when sown under similar conditions on black soils of Salem and Coimbatore districts of the Madras Presidency. The selection work having failed, attention has now been directed to hybridisation. Several hundreds of plants of F_2 and F_3 generations of herbaceum, indicum and cernuum crosses were examined and the promising types have been selected for further trials. X-ray treatment does not appear to have yielded any useful results. The scheme is due for review in the July 1933 meeting. The Sub-Committee recommends that the programme of work might be approved.

9. The *Madras Pempheres and Physiological Research Scheme* commenced work only in September 1931 though it was sanctioned as far back as 1925. The scheme has made a good start with the study of the Pempheres problem from the botanical, entomological and chemical aspects. From the botanical standpoint of view, an attempt has been made to find out what it is in the plant that attracts or repels the insect. On the entomological side the life-history of the insect was studied and as for the chemical point of view the changes in the mineral content of the attacked plant were investigated. The Sub-Committee approves the programme of work for 1932-33.

10. The *Madras Fodder Cholam Scheme* commenced in January 1931. The results of the work so far done show that the low yield of cotton after cholam (sorghum) crop might be due to (*i*) the inability of the plant to utilise soil moisture quickly, (*ii*) to the usual practice of allowing the cholam crop to set seed, (*iii*) to the low nitric nitrogen content of the soil and (*iv*) to the large quantity of roots left in the soil. The work will continue in 1932-33 for the purpose of having these results confirmed.

Central Provinces.

11. The *Central Provinces Botanical Research Scheme* was reviewed in July 1931 when it was decided that it should continue for another two years. The season was very unfavourable for cotton in Central Provinces and Verum 262 and its two new strains, early and late varieties, suffered severely like all other varieties but they maintained their superior quality. Two other promising new strains of Verum 262 have been under severe tests and a number of pure strains of Chanda Jari, with white lint, are being multiplied. Bani 306 and E.B. 31 continue to maintain their superiority. The Sub-Committee approves the programme of work for 1932-33.

12. *The Burma Cotton Improvement Scheme* commenced work in April 1931 with the appointment of six Demonstrators who are required to run the demonstration holdings and demonstrate to the cultivators the improved methods of agriculture. In addition to the six Demonstrators appointed this year six more will be appointed next year as per programme of work.

13. *The Hyderabad Botanical Research Scheme* has now completed its third year. A very large number of plants consisting of single plant selections of the year, progenies of selections made during the previous year and F_2 generation of Bani-Rosea crosses were under observation and out of them several promising types have been selected for further tests. Out of 28 strains that were tested for yields only nine were found worth retaining and they will be further tested. Much useful information has also been obtained about the incidence of the Spotted and the Pink Boll-worm pests at Parbhani. The Sub-Committee recommends that the work should continue on the lines mentioned in the programme for 1932-33.

14. *The Hyderabad Cotton Survey Scheme* has completed its first year. It has made good progress with the botanical classification of the cotton crop grown out of the representative samples of seed obtained from Aurangabad and Parbhani districts and the results were verified by the survey of the standing crop in 19 villages of the same districts. The Sub-Committee approves the programme of work.

Institute of Plant Industry, Indore.

15. During the year under report the Rules and Regulations of the Institute were modified to suit the present needs and the Board of Governors was increased from 7 to 11 members. The ten pure line selections of local Malvi were tested for yields for the first time and they proved no better than mass selected Malvi. The botanical survey of cottons grown in India was continued and a new experiment was started to find out the effects on yield, on the health of the plant and on the soils when various correctives were applied to the soil. Attempts were also made to secure some desirable mutants by X-ray process. The Sub-Committee approves the programme of work for 1932-33. The general programme of work of the Institute which was called for at the last meeting will be considered by the Central Cotton Committee.

16. *The Bikaner Gang Canal Scheme* was started in March 1931 and the year under report was largely devoted to the varietal tests of the 67 pure types of cotton that were obtained from all parts of India. Only 8 of them have proved worth further trial; all the rest having been discarded. The Sub-Committee notes with satisfaction that, since the necessary staff, furnished laboratory and other facilities are now available, work of higher standard has been taken in hand.

17. *The Baroda-Root Rot Scheme* commenced only in February last. The Sub-Committee approves the programme of work drawn up for 1932-33.

Seed Distribution and Extension Schemes.

18. *Hubli and Gadag Schemes.*—The object of the two schemes is to produce and distribute pure seed of Jayawant and Gadag cottons for two lakhs of acres each in Hubli and Gadag centres. The Agricultural Department maintained reserved areas of 17,640 acres in Hubli tract and 22,000 acres in Gadag tract but the Hubli and Gadag Sale Societies distributed pure seed for only 71,533 and 124,000 acres respectively as they could not sell the whole quantity of seed which they had stocked due to the fall in prices. The two societies have shown reluctance to shoulder their full obligations under the scheme and the Sub-Committee recommends that they should be asked to work up to the extent of two lakhs of acres each as originally planned.

The Sub-Committee also recommends that one or more small standing Sub-Committees consisting of not more than three members each should be appointed out of the expert members of this Sub-Committee and also other research workers on the Committee's schemes who are not members of the Committee, to examine every new scheme in all its aspects and offer their advice before it is sanctioned and also to go into all other schemes, past and present, and lay down definite principles for the guidance of this Sub-Committee for sanctioning the new schemes hereafter.

19. *The Khandesh (Banilla) Scheme* commenced only in May 1931 and it has been possible therefore to organise only the first two stages of the scheme in full and the next two stages in part. It is hoped that in 1932-33 the first three stages will be in full working condition according to the plan and that in the fourth stage an area of at least 6,000 acres would be reached.

20. *Surat Scheme.*—Twenty-one seed depots were organised during the year in the Surat-Broach area and pure 1027 A.L.F. seed enough for 73,446 acres in the Bombay Presidency and 157,206 acres in Rajpipla, Chhota Udepur, Jambughoda and Baroda States were distributed.

21. *Sind Scheme.*—Pending the opening of the Barrage for perennial irrigation the grant for this scheme is utilised for carrying out demonstrations on the right bank of the Indus and demonstrations and varietal tests on the left bank with a view to induce the cultivators to take to cotton cultivation when irrigation facilities become available. Accordingly, 15 demonstration plots on the right bank and two demonstration plots and 9 varietal test plots on the left bank were laid out but for one reason or another the results were not satisfactory. The Sub-Committee approves the programme of work for 1932-33.

22. *The Madras Scheme.*—There were 1,200 acres under Seed Farms which were expected to yield 3,000 bags of Co. 2 (Cambodia) seed sufficient to sow 12,000 acres.

23. *Hyderabad Scheme.*—The Department of Agriculture distributed in 66 villages 256,670 lbs. pure seed—207,500 lbs. of Jayawant and 49,170 lbs. of Gadag No. 1—but the area sown with this seed was only 11,300 acres. The Sub-Committee notes that a large quantity of pure seed distributed was not sown due to the rains being late and other causes.

24. *The Central Provinces Scheme* was sanctioned in July 1931 for one year with the object of maintaining the purity of Verum cotton on 50,000 acres the seed of which will be sufficient for 4 to 5 lakhs of acres in 1932-33. The Agricultural Department sold in 1931 enough pure Verum seed for 187,600 acres in addition to the reasonably pure seed sufficient for about 74,360 acres sold extra departmentally. The Sub-Committee has separately made its recommendations for sanction of a less ambitious scheme put up by the Director of Agriculture, Central Provinces.

25. *Lyallpur Ginnery.*—The Sub-Committee notes with satisfaction that the erection of the building and machinery has been completed and the ginnery will commence work next season.

General.

26. *Prize Schemes for clean picking and improved varieties of cotton.*—The Sub-Committee considered the views of the Directors of Agriculture and decided not to recommend any prizes either for clean picking or for improved varieties of cotton.

27. *Broach Cotton Breeding Scheme.*—The Sub-Committee approved of the Budget for 1932-33 which amounts to Rs. 9,250.

28. *Jalgaon Cotton Breeding Scheme.*—The Budget for 1932-33 amounting to Rs. 8,318 was approved by the Sub-Committee.

29. *Disposal of seed of long staple cottons grown in the Punjab.*—The Sub-Committee decided to refer the question to the Director of Agriculture, Punjab, for concrete proposals to be put up for the next meeting.

30. *Investigation into the damage done by Earias Boll-worm in the Punjab.*—The Sub-Committee decided that the matter should be referred to the Director of Agriculture, Punjab.

31. *Employment of ex-research students and ex-servants of the Committee.*—The Sub-Committee recommends that a Special Sub-Committee consisting of the President, three of the Directors of Agriculture, Sir Purshotamdas Thakurdas and Sardar Sampuran Singh might be appointed to consider the various points involved in the present financial arrangement which the Committee has entered into with the Provincial Governments.

Publicity and Propaganda.

32. The Sub-Committee considered the scheme of publicity and propaganda prepared by the Publicity Officer and recommended that the subject be referred to the full Committee.

33. *Appointment of Cotton Botanists for Bombay and the Punjab.*—The Sub-Committee recommends that the Selection Sub-Committee to consider applications for Botanists' posts in the Punjab and Bombay be composed as follows :—

The President,
Sir Purshotamdas Thakurdas,
Dr. McRae,
Mr. Saklatvala and
Mr. Main.

34. *Cotton Policy in the United Provinces.*—The Sub-Committee decided to refer the question to the Director of Agriculture, United Provinces, for putting up definite proposals for the next meeting of this Sub-Committee.

B. REPORT OF THE AGRICULTURAL RESEARCH SUB-COMMITTEE ON NEW SCHEMES AND ADDITIONAL GRANTS FOR SCHEMES SANCTIONED.

1. *Dharwar Cotton Wilt Scheme.*—The Sub-Committee at its last meeting decided that the scheme should be closed down at the end of May 1932 and made a recommendation to the Indian Central Cotton Committee which was accepted that a sum of Rs. 4,000 should be sanctioned, subject to detailed consideration at this meeting, for writing up the results of the work done from 1923 when the scheme first commenced. The final progress report and the fresh proposals for writing up the results submitted by the Director of Agriculture, Bombay, have now been considered by the Sub-Committee which recommends that the scheme might be sanctioned till the end of January 1933 subject to review at the end of this period, at a cost of Rs. 9,503 in the place of Rs. 4,000 already sanctioned.

2. *Sind Physiological Scheme.*—The Indian Central Cotton Committee at its last meeting provisionally sanctioned the extension of the scheme for one year to avoid any break in the work till the final report was considered at this meeting and further extension was granted. The water requirement experiments are inconclusive due to disturbing factors such as water table and rain but a duty of 100 gives 16 maunds of *kapas* per acre. The same experiment shows that there is actual deficit of available nitrogen at the time of flowering and bolling. Punjab-Americans are capable of high yield in Sind conditions, but Egyptians are very susceptible to White Ant attack and "Red Leaf" disease. The Sub-Committee is convinced that the work of the past five years has been fruitful and that further work is necessary to confirm the conclusions already arrived at. The Sub-Committee therefore recommends that the scheme might be extended for another period of five years. The extension entails a total expenditure of Rs. 1,62,854.

3. *Punjab Root-Rot Scheme.*—The Sub-Committee considered the Root-Rot Scheme submitted by the Punjab Provincial Cotton Committee and recommends that the scheme might be sanctioned at a total cost of Rs. 13,506 for three years.

4. *Hyderabad Cotton Survey Scheme.*—The Sub-Committee considered the proposal to extend this scheme from four to five years so that the programme is a little slowed down and the number of villages in which samples are selected is increased to make the results of the survey more reliable. The Sub-Committee recommends that the proposal be approved. The additional expenditure required is Rs. 1,560 for the current season and Rs. 2,340 for each of the remaining years.

5. *United Provinces Entomological Scheme—Grant for Staff.*—The application of the Entomologist to the Government of the United Provinces to extend the services of the staff engaged on the scheme for another year at a cost of Rs. 6,400 including provision for Provident Fund was considered and the proposal was sanctioned.

6. *Scheme for spraying trials against the white fly pest in the Punjab.*—The Sub-Committee considered the proposals put up by the Director of Agriculture, Punjab, and sanctioned the scheme at Rs. 11,250 for one year.

7. *Seed Distribution and Extension Schemes—(i) Co. 2 and H.1 (Madras).*—The Sub-Committee considered the proposals put up by the Director of Agriculture, Madras, for the extension of Co. 2 in Coimbatore and Salem districts and H.1 in the Westerns area of the Madras Presidency, and recommends that the Co. 2 scheme might be sanctioned for five years at a total cost of Rs. 81,310. The Sub-Committee also recommends that the H.1 scheme might be sanctioned for two years at a cost of Rs. 18,860 subject to review at the end of that period in the light of the principles to be laid down as mentioned in paragraph 18 of Section A of the report of the Sub-Committee.

(ii) Malvi (Gwalior).—The Sub-Committee is unable to recommend the sanction of this scheme in the absence of any satisfactory data to show that Malvi is superior to the local cotton.

(iii) Verum (Central Provinces).—In the absence of any representative from the Central Provinces to explain the details, the Sub-Committee recommends that the scheme might be referred, if Mr. Plymen thinks it urgent, to the Standing Finance Sub-Committee which might be authorised to sanction it; otherwise it might be brought before this Sub-Committee at its next cold weather meeting.

(iv) Jayawant (Hubli).—The Sub-Committee considered the request from the Hubli Society for an additional loan of Rs. 5,000 without interest to meet the anticipated loss in seed transaction in 1932-33. The Sub-Committee recommends that this be approved.

C. Report of the Agricultural Research Sub-Committee on Research Students.

The Sub-Committee considered and approved the progress report on the work of Bhai Partap Singh Bhullar and Bhai Ajaib Singh Gulzar, Research Students, Punjab. Their final reports are due in December.

2. The progress reports for 1931-32 and the programme of work for 1932-33 of Mr. Madanlal Bhatia, working on Jassids at Lyallpur and Mr. Bhola Nath working in Plant Breeding and Cytology at Indore were considered and approved.

3. The Sub-Committee recommended at its last meeting that the programmes of work drawn up for Messrs. B. N. Bhargava and B. S. Seshgiri, Research Scholars in Cotton Marketing and Economics at Lucknow and Surat respectively, required curtailment. The revised programmes were considered and approved.

4. The Sub-Committee also approved the programmes of work for Messrs. Santok Singh Jaggi and S. V. Doraiswami Ayyar, Research Students in Cotton Marketing and Economics in the Punjab and in the Madras Presidency respectively.

5. The application from Rai Saheb Ram Prasad Singh for a foreign scholarship for his son was considered. The Sub-Committee decided not to recommend the scholarship.

APPENDIX XVII.

SUBJECT 48.—*Investigation into Cost of Growing Cotton in India.*

Secretary's Note.

The following resolution was passed by the Indian Central Cotton Committee at its last meeting :—

"That a sum amounting to Rs. 10,000 be provided in next year's budget for the initial expenses of an investigation into the cost of production of cotton and rotation crops."

It was also decided that the question of appointing a small Sub-Committee to work out jointly with the Sugar Committee the details connected with the investigation should be left to the Standing Finance Sub-Committee. A Sub-Committee consisting of the following members was accordingly appointed :—

The President,
The Vice-President,
Sir Purshotamdas Thakurdas,
Rao Bahadur Bhimbhai Ranchodji Naik,
Mr. J. Vonesch,
Mr. Haridas Madhowdas (representative of the East India Cotton Association), and
The Secretary.

Owing, however, to the temporary absence out of India of Sir Joseph Kay and Mr. J. Vonesch, the Standing Finance Sub-Committee at its meeting held on the 27th June 1932 appointed Mr. Chunilal B. Mehta to take the place of Sir Joseph Kay and Mr. F. K. Jackson to take the place of Mr. J. Vonesch on the Sub-Committee.

The Chief Economist who will be in charge of this investigation is expected to join duty shortly and the first meeting of the Joint Sub-Committee is likely to be held some time in August.

This is for information.

APPENDIX XVIII.

SUBJECT 49.—*Institute of Plant Industry, Indore—Report of Policy to be followed.*

Secretary's Note.

At the last meeting of the Committee held in December 1931, the question of policy to be followed at the Institute of Plant Industry, Indore, was fully discussed and Mr. F. K. Jackson, the Director of the Institute, agreed to submit a programme for consideration at this meeting. The programme received from Mr. Jackson together with the programme approved in 1923 and the programme of work for 1932-33 is attached for consideration.

INSTITUTE OF PLANT INDUSTRY, INDORE.

General Programme of Cotton Research.

(Revised and extended, July 1932.)

Since the initial programme of cotton investigations was drawn up in 1923 the activities of the Institute (which started operations in 1925) have developed and cover a much wider territory.

In addition to Central India this now includes all types of soil and climate in Rajputana, e.g., the arid sandy areas of Bikaner, the somewhat less arid State of Jaipur, the borders of the Jumna valley in Bharatpur and the zone typified by Bundi and Tonk States. The area dealt with in Malwa proper and the lowlying tracts adjoining the Central Provinces and Bombay Presidency has also grown in size by the adherence of new States, as well, also, as in Bundelkhand which again is distinct in agricultural character. Hence a greater variety of problems in cotton cultivation now present themselves and this tendency will continue as more States join the Institute.

The Indian Central Cotton Committee has also recently expressed its desire that the original programme of cotton investigations should be developed and extended.

For these reasons it has become necessary to revise and extend that programme although its main lines are still maintained. The items are not to be regarded as forming a rigid and limiting basis of work; in all scientific research glimpses into unknown and attractive country are afforded from time to time and exploration must be permitted.

(*a*) *Botanical Survey.*

Up to the present, little or no attempt has been made in India to isolate, classify and study the unit species which form the framework of the various species and varieties of cotton. It is true that the Indian cottons have been classified and surveyed from the point of view of systematic botany, but this is entirely inadequate for modern work as by this method cottons of very different agricultural value are not distinguished. This work has a direct practical bearing. It will, in all probability, lead to the isolation of useful types for distribution. It will also provide material for the plant-breeder and for critical work on the physiology and agronomy of cotton. In addition a revision of the present systematic classification of cottons will be considered, the collection of types already amassed providing good material for comparative studies.

(*b*) *Cotton Breeding and Selection—Economic.*

(*i*) The creation, establishment and maintenance of an island of improved cotton on the Malwa plateau. The types isolated will be available for other areas in India and the crop will enable a grade of improved cotton to be established for the mills and for the shippers.

(*ii*) The introduction of a pure and improved early-ripening, hardy cotton for the lowlying tracts of Central India.

(*iii*) The discovery of the most profitable cotton to be grown in the new Gang Canal Colony, Bikaner.

(*iv*) The selection of a pure improved cotton or cottons to replace the mixtures grown in other parts of Rajputana and in Bundelkhand.

(*c*) *Cotton Genetics.*

The mode of inheritance of characters in cottons will be studied. Many problems await investigation; among them one of the most important is the genetical relationship between the factors determining lint length and ginning percentage with the associated variations in yield.

The effects of exposing cotton seeds, buds and pollen to X-rays and radium emanations will be investigated with a view to producing mutants of economic value. It has been found by several workers in recent years that such treatments have the effect of violently disturbing the arrangement of chromosomes and even of genus in the germ cells and consequently producing types differing widely from the parent. The possibility of thus producing new types of economic value has hardly been touched as the whole subject is in its infancy and an entirely new field of unknown possibilities is awaiting exploration. Both these studies will also involve cytological work.

(d) The Physiology of the Cotton Plant.

In order to increase production something more than improved varieties is needed. The new varieties must be provided with suitable conditions for growth. To discover these, the physiology of the cotton plant must be studied and the factors which now limit production must be determined. This involves the study of root-development, the relations of the root-system to the soil type and the influence of factors, such as soil moisture, soil-aeration and drainage, soil texture and soil temperature, on growth. Included in these studies is the discovery of the factors which produce the shedding of buds, flowers and bolls. The general nutrition of the cotton plant will also be considered and how far the yield can be improved by manuring and other methods of soil treatment.

In the course of these studies many more types of soil are now involved than those of the Malwa plateau and accordingly a collection of soil profile samples will be made from different parts of the area covered. Mechanical analysis and other examinations will be made so that the behaviour of cotton may be correlated with their characteristics.

(e) The Influence of Environmental Factors on the Lint Characters.

Modern industries demand a uniform product. Once this is obtained, the purchase of raw material as well as the details of manufacture are simplified. In the case of cotton, any tract which can produce uniform lint will rapidly establish its reputation in the trade. It is well known, however, that the cotton fibre alters in character according to the soil on which it grows and to some extent according to the season. Further work is desirable on this matter with the object of discovering what factors bring about these changes, which varieties are most easily affected and whether any practical remedies exist for improving the uniformity of the fibre of the same cotton. This portion of the work is of direct bearing on the question of the maintenance of grades of cotton for the highest class of spinning in this country. It is hoped to resume this piece of work on somewhat more intensive lines than those previously adopted.

(f) Field Experiment Technique.

With the exception of preliminary trials all field experiments involved by the programme will be laid out either on the replicated Randomized Block or the Latin Square system as elaborated at the Rothamsted Experimental Station or with such later developments as seem desirable to adopt. Modern developments in statistical mathematics will be used in interpreting results.

Programme of Cotton Research, 1923.

"The Central India Agency includes two distinct cotton tracts: (*a*) the Malwa plateau (a long staple area) in which the best indigenous cottons are found and where improved types like Cambodia have already given excellent results under cultivators' conditions and (*b*) the low-lying areas adjoining the Central Provinces where short staple cotton of the *Roseum* type is the rule.

The aim of the Indore Institute (as regards cotton investigations) is to provide a centre of research for the black soil tracts. At this centre any problems suggested, either by the Central Cotton Committee or by other workers in India can be taken up. A special effort will be made to create a good library dealing with the various aspects of cotton production for the use not only of workers at the Institute itself but also of other investigators on cotton in India.

While the Institute will always be prepared to consider any useful suggestions as regards problems to be investigated, the following preliminary programme is put forward. This falls into four parts.

(*a*) *Botanical Survey.*—Up to the present, little or no attempt has been made in India to isolate, classify and study the unit species which form the framework of the various species and varieties of cotton found on the black soils. It is true that the Indian cottons have been classified and surveyed from the point of view of systematic botany, but this is entirely inadequate for modern work as by this method cottons of very different agricultural value are not distinguished. The work needs to be carried much further and nothing short of the isolation and study of the unit species will meet the case. This work has a direct practical bearing. It will, in all probability, lead to the isolation of useful types for distribution. It will also provide material for the plant breeder and for critical work on the physiology and agronomy of cotton.

(b) *Plant Breeding.*—Two main practical problems will be taken up at once :—

(1) the creation, establishment and maintenance of an island of long staple cotton on the Malwa plateau. The types isolated will be available for other areas in India and the crop will enable a grade of improved cotton to be established for the mills and for the shippers ;

(2) the improvement of the fibre of the hardy *Roseum* type which is, in all other respects, admirably suited for the lowlying areas of Central India.

In the solution of these questions the inheritance of characters will have to be studied. The results will apply not only locally but will also be of general interest.

(c) *The Physiology of the Cotton Crop.*—In order to increase production something more than improved varieties is needed. The new varieties must be provided with suitable conditions for growth. To discover these the physiology of the cotton plant must be studied and the factors which now limit production must be determined. This involves the study of root development, the relations of the root system to the soil type and the influence of factors such as soil moisture, soil æration and drainage, soil texture and soil temperature on growth. Included in these studies is the discovery of factors which produce the shedding of buds, flowers and bolls. During the course of these physiological studies, the general nutrition of the cotton plant will be considered and how far the yield can be improved by manuring and other methods of soil treatment.

(d) *The Influence of Environmental Factors on the Lint Characters.*—Modern industries demand a uniform product. Once this is obtained the purchase of raw material as well as the details of manufacture are simplified. In the case of cotton, any tract which can produce uniform lint will rapidly establish its reputation in the trade. It is well known, however, that the cotton fibre alters in character according to the soil on which it grows and to some extent according to the season. Further work is desirable on this matter with the object of discovering what factors bring about these changes, which varieties are most easily affected and whether any practical remedies exist for improving the uniformity of the fibre of the same cotton. This portion of the work is of direct bearing on the question of the maintenance of grades of cotton for the highest class of spinning in this country."

INSTITUTE OF PLANT INDUSTRY, INDORE, C. I.

PROGRAMME OF RESEARCH WORK FOR THE YEAR ENDING 30TH JUNE 1933.

In this programme field experiments are classed by themselves because in many cases the problems they are intended to solve will be attacked co-operatively by workers in different sections.

For every field experiment a Scheme has been prepared on a standardized model ; all details of lay-out, treatment or variety, agricultural operations and records to be maintained are included and the persons responsible for the conduct of the experiment are named.

Only what may be termed laboratory or pot-culture work is arranged under sections—chemical, plant-breeding or botanical.

Four distinct rotation types have been standardized and every field on the farm has been placed under one or other, so that after some years their relative advantages and convenience may be recognized by experience.

Field Experiments.

Experiment 1.—Manurial trials, Malvi cotton (nitrogenous manures).

" 1a.—Manurial trials, Malvi cotton (compost and farmyard manure—poor land).

" 1b.—Manurial trials, Malvi cotton (compost and farmyard manure—rich land).

" 1c.—Manurial trials, Malvi cotton (superphosphate as a soil deterioration corrective).

" 2.—Control of soil moisture by surface drainage.

" 3.—Response of Malvi cotton to irrigation.

" 4.—Effect of associated growth of cotton and legumes.

" 5.—Effect of *kharif* legumes upon a succeeding wheat crop.

" 6.—Comparative root activity and distribution of six legume crops and their yields of seed and straw.

Experiment 7.—Relative economic merits of five rotations, embodying differences in crop sequences, inclusion of legumes, compost manuring and methods of tillage.

„ 8.—The economic results of different spacings of tur (cajanus indicus) in a juar crop and influences on a succeeding cotton crop.

„ 9.—Juar variety trial—5 types.

„ 10a.—Comparison of Sudan grass with juar as green fodder crops, irrigated and barani.

„ 10b.—Comparison of Sudan grass and natural grass as a permanent lea.

„ 11a.—Groundnut variety trial, manured and unmanured—poor land.

„ 11b.—Groundnut variety trial, manured and unmanured—rich land.

„ 11c.—Comparison of effects of sowing whole, cracked and shelled groundnuts soaked and dry.

„ 12.—The effect of different modes of winter ploughing (shallow eversion, deep eversion, inversion, sub-soiling) upon succeeding *kharif* and other crops in a four-year rotation.

„ 13.—The effect of three methods of inter-cultivation of cotton and juar compared with hand-weeding only throughout a rotation.

„ 14.—Comparison of six different spacings in Malvi cotton.

„ 15.—Comparison of three types of Cambodia cotton, Cawnpore 9 and a Malvi type sown early on irrigation and sown on rains, irrigated later and not irrigated.

„ 16.—Soil uniformity test—

Objects :

The estimation of natural soil uniformity.
The same estimation as modified by grading and drainage.
The rise of fertility due to grading and drainage.
To discover the conditions governing the necessity of non-experimental borders in cultural trials.
To discover the most suitable size and shape of plot for field experiments under local conditions.

„ 17a.—Yield test of Malvi cotton selections on rich land.

„ 17b.—A duplicate test on well-drained but poor land.

„ 18.—Test of comparative vigour of seed from selfed cotton selections and from a mixture of the same selections grown unselfed in 1931.

„ 19.—The effect, if any, of X-ray treatment on the vigour of a strain of Cambodia cotton highly susceptible to red leaf and leaf curl under deteriorated soil conditions.

The above 26 field experiments starting in the *kharif* season are arranged on the Institute Farm with replicated plots on either the randomized block or Latin square system and involve a total of 970 unit plots.

Small-scale tests of some 90 new introductions, whether crops or varieties of crops, will be sown, usually in 2 to 4 short rows. Among the more important of such subjects are the following :—Groundnut, Soya bean, Tobacco, Tur, Jowar, Sesamum and Castor.

Chemical Section.

Soil Studies.

1. Determination of properties of typical soils in Central India and Rajputana with a view ultimately to divide the region into homogeneous agricultural tracts.

2. The collection of soil profiles from the region.

3. A study of the soil of three typical fields at the Institute, embracing mechanical and chemical analysis, the movement of moisture and changes in PH values in the profile during the year and leaf sap reactions of crops growing in the soils.

4. Examination of the relative nitrifying power of some typical Malwa and Rajputana soils.

5. Investigation of the controlling influences of nitrogen supply and moisture on crops in Malwa in Field Experiments Nos. 1, 1a, 1b, 1c, 2, 3, 5, 7, 11a and 11b and the estimates (soil permeability, moisture and nitrogen content, feeding values, etc.) associated with those experiments.

Studies on red leaf and leaf roll of Cambodia cotton, embracing investigations into composition of leaf sap and soil water.

Further developments in compost making mainly in the directions of economy in labour and water, the investigation of the fixation of nitrogen and special adjustments of the process.

Agronomical Studies.

Cambodia cotton.—Preliminary culture tests to discover methods of controlling factors inducing a vigorous start to seedlings and the health of the plants.

Sugarcane.—Small scale work on systems of cultivation, dates of planting, regulation of nutrition and moisture.

Soya Beans.—Investigation of merits of soil inoculation with nodule bacteria and of application of superphosphate as a soil corrective.

Lucerne.—Study of possible improvement in system of cultivation, value of soil inoculation with a specific strain of nodule bacteria and determination of optimum stage for cutting, with analysis at different stages of growth, there being no India data.

Plant Breeding Section.

Selection work will be continued among single-plant cultures of Malvi, Bani, Roseum, Verum, some Cawnpore crosses and Cambodia cottons. The F_2 generation of crosses between the following varieties will also be subjected to selection :—

Cawnpore roseum × Bani ; Malvi × Bani ; Bani × roseum ; Roseum × Malvi ; Malvi × Cawnpore roseum.

Crossing.—A desirable early but delicate Cambodia strain will be crossed with a hardy but late type.

The genetical relation between lint length and ginning percentage.—In this study the F_2 generation of a cross between Cawnpore 20 and Bani 13 will be examined statistically.

Botanical Section.

Survey of Indian Cottons.—Forty-three additional types have been obtained and will be sown, and selfed. As with the types already in hand detailed morphological descriptions and records with drawings will be made, including those of root types. Herbarium specimens will be mounted, also ginned and whole seeds with lint halos and bolls preserved in formalin.

X-radiation Studies.—1. Pure line seed of Malvi, Bani and roseum cotton will be X-rayed at different dosages and sown alongside controls ; morphological variations from seedling to maturity will be recorded.

2. F_1 generation seeds from a cross will be similarly treated.

3. Flower-buds and pollen of Malvi, Bani and roseum will be X-rayed and the nowers selfed ; also X-rayed pollen applied to an untreated parent. Pollen and ovules will be used in several crosses after exposure.

4. The seeds obtained from X-rayed plants in 1931 will be sown and variations in progeny noted.

5. Wheat seeds from plants X-rayed in 1931 will be sown and variations noted.

Cytological Studies.—1. Material from the X-radiation studies will be examined.

2. An investigation of the development of the seed in " No lint " cotton and in Wagale is to be attempted.

Field Experiments in States.

With the co-operation of the Darbars concerned and in some cases of private cultivators twenty-four replicated field experiments have been arranged as follows :—

Experiment 20*A*.—Yield trial of five Malvi strains and local cotton, on the Dhar State Farm.

,, 20*B*.—A duplicate on the Rutlam State Farm.

,, 20*C*.—A duplicate on the Narsingarh State Farm.

,, 21*A*.—Yield trial of five types of irrigated cotton (four of Cambodia and Cawnpore 9).

,, 21*B*.—A duplicate on the Rutlam State Farm.

,, 21*C*.—A duplicate on the Narsingarh State Farm.

,, 22*A*.—Yield trial of four barani cottons (Verum, Roseum 15, Banilla, Malvi) for the Nimar tract on the estate of Seth Bhanwar Lal Sethi at Sanawad, Holkar State.

,, 22*B*.—A duplicate on the estate of V. S. Khode, Esquire, B.A., LL.B., Vakil, at Khargone, Holkar State.

,, 22*C*.—A duplicate on land in Dhar State arranged by the Agricultural Superintendent, Dhar.

Jaipur.

Experiment 1.—Comparative studies on Cambodia, Punjab 289F and Malvi cottons under different systems of cultivation.

,, 2.—Yield trial of ground-nut varieties.

,, 3.—Bajra and Tur spacing test.

The above are to be on the Jaipur State Farm.

Bharatpur.

Experiment 1.—Yield trial of four varieties of barani cottons (Cambodia, Cawnpore 520, Rosea Bhatla and Mollisoni).

,, 2.—Yield trial of four varieties of irrigated cotton (two Cambodia types, Cawnpore 402 and Cawnpore 9).

,, 3.—Yield trial of ground-nut varieties.

The above are to be on the Bharatpur State Farm.

Experiment 4. } Scheme No. 1 will, it is hoped, also be carried out on three other
,, 5. } types of land in the State.
,, 6. }

Bikaner.

Experiment 1.—Yield trial of five cotton varieties (Punjab 289F, Cawnpore 402, Cawnpore 520, Sanguineum, N. T. 12 and Mollisoni).

,, 2.—Yield trial of three cotton varieties (Acala, Early American, N. T. 39, Roseum N. T. 10).

,, 3.—Single plot trials of twelve cotton varieties.

,, 4.—Irrigation test—frequency and quantity—on Mollisoni cotton.

,, 5.—Duplicate on Punjab 289F cotton.

,, 6.—Date of sowing test, on Mollisoni cotton.

,, 7.—Manurial test, legume green manure and compost.

The above are on the Ganganagar Farm of Bikaner State, in the Gang Canal Colony, under the special scheme of the Indian Central Cotton Committee.

RABI CROP EXPERIMENTS.

The detailed Field Experiment Schemes for *rabi* crops have not yet been prepared. They will include yield trials of barani and irrigated wheat and probably of gram and linseed.

Those of the Field Experiments begun in the *Kharif* season which are continuous for several years will of course be in operation.

APPENDIX XIX.

SUBJECT 50.—*Representation of the Indian Central Cotton Committee on the Advisory Board of the Imperial Council of Agricultural Research.*

Secretary's Note.

Under the Rules and Regulations of the Imperial Council of Agricultural Research the Indian Central Cotton Committee is entitled to nominate one member to the Advisory Board of the Imperial Council of Agricultural Research and at its 19th meeting held in July 1929 the Committee appointed Mr. S. D. Saklatvala as its representative. Owing, however, to his inability to attend regularly meetings of the Board outside Bombay, Mr. Saklatvala tendered his resignation, and at its meeting held on the 8th April 1932, the Standing Finance Sub-Committee appointed Rao Bahadur Bhimbhai Ranchodji Naik to take Mr. Saklatvala's place. The action of the Sub-Committee requires the approval of the Indian Central Cotton Committee.

APPENDIX XX.

SUBJECT 51.—*Provincial Cotton Committees—Abolition of United Provinces Provincial Cotton Committee—Letter from the United Provinces Government.*

Secretary's Note.

At the last meeting of the Committee held in December 1931, the following resolution was unanimously passed :—

"That the Central Cotton Committee, while being thoroughly appreciative of the work which some Provincial Cotton Committees have accomplished, feels that sufficient use is not made of these local advisory bodies and recommends that they should be more closely associated with all matters connected with grants from the Committee. The Central Cotton Committee further deplores the action of the United Provinces Government in failing to re-constitute the United Provinces Provincial Cotton Committee but trusts this will last only for the period of the financial stringency."

A copy of the above resolution was forwarded to the United Provinces Government and the following reply has been received.

Copy of letter No. 30/XII-A-73, dated the 22nd January 1932, from the Secretary to Government, United Provinces, Allahabad, to the Secretary, Indian Central Cotton Committee, Bombay.

SUBJECT.—*Abolition of the United Provinces Provincial Cotton Committee.*

With reference to your letter No. 2077, dated January 9, 1932, forwarding a copy of a resolution on the above subject, which was passed by your Committee at its meeting held on December 15, 1931, I am directed to say that the circumstances which led to this Government's decision not to re-constitute the United Provinces Provincial Cotton Committee are, briefly, as follows.

2. At a conference between the Director of Agriculture, United Provinces, and members of the Upper India Chamber of Commerce interested in cotton, which was held in August 1930, a definite policy regarding cotton was agreed upon and is being carried out. Cotton policy in the United Provinces is therefore settled for a number of years. Further, the Upper India Chamber of Commerce has constituted a Cotton Sub-Committee to deal with matters relating to cotton. These arrangements, this Government considered, did away with the necessity of having a Provincial Cotton Committee, and in these circumstances and in view of the pressing need for economy, they decided not to reconstitute the Committee for the present.

3. I am to add that, if and when the Provincial Cotton Committee is reconstituted, this Government will bear in mind your Committee's desire that such local advisory bodies should be more closely associated with all matters connected with grants from the Indian Central Cotton Committee.

APPENDIX XXI.

SUBJECT 52.—*Provincial Cotton Committees—Abolition of Burma Provincial Cotton Committee.*

Secretary's Note.

The following extract from a resolution passed by the Committee at its last meeting was forwarded to all Provincial Directors of Agriculture :—

"That the Central Cotton Committee, while being thoroughly appreciative of the work which some Provincial Cotton Committees have accomplished, feels that sufficient use is not made of these local advisory bodies and recommends that they should be more closely associated with all matters connected with grants from the Committee ....."

The reply below has been received from the Director of Agriculture, Burma. In the circumstances mentioned no action is called for at present.

Copy of letter No. 3745/1A-48, dated the 31st March 1932, from the Director of Agriculture, Burma, to the Secretary, Indian Central Cotton Committee.

PROVINCIAL COTTON COMMITTEE.

I have the honour to acknowledge receipt of your letter No. 2239, dated the 15th January 1932, and to state that the Cotton Committee of this province has not met since 1926. On several occasions subsequent to that date members were asked to submit subjects for discussion but none were forthcoming. The province did not accept the

legislation relating to Cotton Transport and the Licensing of Ginneries on the grounds that the abuses prevalent in India did not exist in Burma to anything like the same extent. In view of this fact and of the fact that the area under cotton in Burma is small and shows little tendency to increase it would appear to be anomalous to require a special committee for this crop when similar committees did not exist for other and more important crops. The separation of Burma from India is possible at a very early date and in view of this possibility and of the other facts mentioned above I do not consider that any useful purpose would be achieved by resuscitating the Committee at the present time.

APPENDIX XXII.

SUBJECT 53.—*Provincial Cotton Committees—Proceedings of the Central Provinces Provincial Cotton Committee.*

Secretary's Note.

The minutes of the meeting of the Central Provinces Provincial Cotton Committee held on the 23rd February 1932 are attached for information. The Committee considered the question of seed supply for Central Provinces and Berar and agreed to the necessity for licensing the ginning and pressing factories to counteract the evil consequences of the pools, though further consideration of the subject was postponed to the next meeting. The Committee also decided that the Department of Agriculture should confine its attention to the spreading of only Verum cotton and passed a resolution supporting Mr. Kolhe's Central Provinces Cotton Market Bill which was accepted by the Indian Central Cotton Committee in its last meeting.

Proceedings of the meeting of the Central Provinces Provincial Cotton Committee held on Tuesday, the 23rd February 1932.

Present :

F. J. Plymen, Esquire, C.I.E., I.A.S., Director of Agriculture, Central Provinces, Chairman.
R. N. Banerjee, Esquire, I.C.S., Director of Industries, Central Provinces.
Sir Sorabji Mehta, Kt.
M. P. Kolhe, Esquire.
M. R. Dokras, Esquire, M.L.C.
Rao Bahadur M. G. Deshpande.
Rao Bahadur G. R. Kothare.
D. N. Mahta, Esquire, Economic Botanist for Cotton, Central Provinces, Secretary.

Visitors.

R. H. Hill, Esquire, I.A.S., Deputy Director of Agriculture, Southern Circle, C. P.

J. C. McDougall, Esquire, Deputy Director of Agriculture.

The minutes of the last meeting were confirmed and action taken by the Local Government on Resolution 3 was recorded.

The Chairman referred to the congratulatory remarks of the Indian Central Cotton Committee on the useful work carried out by the Central Provinces Cotton Committee.

SUBJECT NO. 1.—*Cotton Seed Supply for the ensuing year.*

The Chairman said Mr. McDougall had investigated this question and he would therefore ask him to explain the position.

Mr. McDougall said there was doubtless going to be a shortage of seed this year but after careful examination of the position, he thought the difficulty would be tided over. He explained that the current season's production would be somewhere in the neighbourhood of 40 per cent. as compared with last year but the redeeming feature was the decline in the export of cotton seed from the province, which during the last three months was only 17·88 per cent. of last year's export. If the exports continued in the same proportion during the rest of the period there would be left a balance of some 3,450,876 maunds of cotton seed for sowing and feed. In view of other feeding stuffs, such as oil-cakes, *teora*, and *chuni*, etc., being readily available at cheaper rates, he thought the demand for cotton seed for feed would be considerably less than it was last year and he therefore ventured to hope that there would be sufficient seed left for sowing in the coming season.

The Chairman said it had been suggested by some that Government should take steps to prohibit the export of cotton seed but he did not think that the Committee could recommend such an action to Government. He thought that as there were now so many alternatives to cotton seed for feed which could be bought at much cheaper rates, the difficulty about cotton seed for sowing purposes would probably not be so great as was apprehended.

Mr. Banerjee said he would like to know where the seed came from and if the Agriculture Department could not take steps to buy up and store, for sowing in the coming season, as much cotton seed as possible.

The Chairman in explaining the position said that there was certainly not going to be enough seed for "A class" farmers. He thought, however, that the number of "B class" farmers would have to be increased. There was a provision of a sum of Rs. 28,000 for purchase of seed, out of which Rs. 16,000 were allotted to Berar. He assured the Committee that he would do his best to buy up as much seed as possible.

SUBJECT NO. 2.—*Resolution of the Indian Central Cotton Committee regarding cotton ginning and pressing factories pools.*

Rao Bahadur M. G. Deshpande, in opening the discussion said the Indian Central Cotton Committee had passed a resolution that the report of the Local Sub-Committee on the investigations carried out in the Central Provinces and elsewhere be adopted. The growers' representatives did not think that the report of the Local Government on the effect of pools on the price paid to the grower for his cotton went far enough and desired the Committee to request Local Governments to undertake legislation to stop the evil by the fixation of maximum prices.

Mr. Kolhe said the accuracy of the report was challenged by some trade members on the ground that the investigators had to depend on the information given them by interested parties.

Mr. Banerjee said the report of the Central Provinces investigations was circulated to members of the Local Sub-Committee of the Indian Central Cotton Committee which showed that they did not disagree with the report. But the Local Sub-Committee was of opinion that under the present conditions nothing could be done by the Cotton Committee beyond drawing the attention of the Local Government to the investigations carried out by its own officers and the matter was thus left to the Local Government who had asked him to draw up proposals to deal with the evils resulting from pools.

Mr. Kolhe said that the evils were admitted by all but what was wanted was an adequate remedy to prevent the grower from being penalised by a combine of factory owners. He would request Mr. Banerjee to give his own views on the subject.

Mr. Banerjee said that pools had been in existence in most of the larger centres during the last ten years and the rates charged for ginning and pressing had been generally higher in many centres than they should be under conditions of normal competition. But there was no evidence to show that the increase resulting from these pools was excessive in many places as there were several natural checks. For example, cotton was often diverted to centres without pools and many of the merchants and purchasers were also setting up their own factories to avoid the high cost of ginning and pressing. The establishment of factories in some of the larger villages in the interior had similarly enabled the cultivator to avoid pooling centres. He did not deny that the agriculturist suffered to some extent by the system of pools, but he felt that any drastic interference would be against the right of free trade. The practice arose merely from the businessman's instinct of self defence against the consequences of cut-throat competition. So long as there was no abuse, the practice resulted in economy in overhead charges and ensured the working only of the minimum number of gins and presses necessary for disposing of the cotton of each centre. The remedy that he could think of was to limit the number of factories at each centre to such a figure as would be just sufficient for coping with the total volume of cotton normally coming to the local market and to close down all the surplus factories. He agreed with the suggestion that no license should be granted to a ginning and pressing factory which did not undertake to work for at least eight weeks in the year unless prevented by causes beyond the control of its owner. Such a system of licensing would have to apply to all existing as well as new factories.

Sir Sorabji Mehta said that it seemed to him that they were going to bring in legislation as recommended by the Indian Cotton Committee of 1917. He thought that what was required was an all-India legislation and if the Local Government approached the Indian Central Cotton Committee, the latter would go up to Government of India for it.

Rao Bahadur Kothare said he could not see how legislation was going to help the agriculturist. He was himself in favour of free trade and did not think that there should be any interference. The pools were the result of the present day tendency for rationalisation so as to reduce costs and to try to stop them would mean that the stronger concerns would obtain monopoly and the prices would go up considerably.

Rao Bahadur M. G. Deshpande said he was in favour of issuing licenses only to those who agreed to work for eight weeks in the year and for fixing maximum rates.

Mr. Dokras favoured issuing of licenses and fixed rates.

Mr. Kolhe said he would favour any method, whether it was that of issuing licenses for fixation of maximum rates, as he felt that something must be done.

The Chairman, in winding up the debate, said that the general opinion of the Committee was that legislation was necessary to introduce a system of licensing whereby maximum rates could be applied. He thought that the best thing would be to ask Mr. Banerjee if he would circulate his proposals, drawn up in the light of their discussion, to members of the Committee. These could then be discussed at a subsequent meeting.

This was agreed to.

SUBJECT NO. 3.—*The question whether both pure Verum and pure Roseum seed should be supplied to the cultivator.*

The Chairman said that this subject had been discussed at some length at the last meeting of the Indian Central Cotton Committee. That Committee would no doubt be of opinion that the Agricultural Department should confine itself to Verum. But the question was whether they should fill the whole of the province with Verum. He knew that Verum was not as good as they wanted it to be, but the Botanical Section was trying to bring out new and more suitable strains of this cotton. He drew attention of members to the spinning test reports from Matunga on Verum which, he said, were very satisfactory. He would like a little guidance as to what types of cotton should be aimed at.

Sir Sorabji Mehta said that, in his opinion, there was still scope for short staple, though he was definitely against growing Roseum. He thought that Verum lacked uniformity which should be aimed at in the work of improvement.

The Secretary said that this aspect was already receiving their attention.

Mr. Banerjee said that in his opinion the Department should confine itself to Verum but if any one wanted to grow any other type, he could do so.

After some discussion it was decided that the Department should confine itself to Verum for the present but that a small area should be maintained under Roseum on Government Farms.

SUBJECT NO. 4.—*The resolution passed at the second meeting of the Verum Central Organisation Committee held at Akola on the 13th December 1931.*

"Resolved that the attention of the Provincial Cotton Committee be invited to Rao Bahadur M. G. Deshpande's apprehension that the spread of Garrowhill cotton in Wardha, Arvi and some parts of Berar will affect adversely the reputation of the local cotton. That steps be taken by the Provincial Cotton Committee to discourage the spread of this variety."

The Chairman explained what the Verum Central Organisation Committee was and said that as it had drawn their attention to this subject, it was up to them to take action on it. The question of Garrowhill cotton came up a few years ago. We saw some of it in Wardha and Arvi. It was bought for mixing to increase the ginning percentage of local cotton. He wanted to know what action could be taken to discourage the spread of this variety.

Sir Sorabji Mehta said that, before arriving at any decision, it was necessary to find out what quantity of this cotton was met with in the province.

Rao Bahadur M. G. Deshpande said that at present the quantity involved was not very great, but he was told that it obtained the same price as Verum. In appearance it was very fine and, as there was a danger of its spreading, they should have propaganda against it.

Mr. Dokras said that on account of the higher lint percentage, the buyer was tempted to pay a higher price for it. He was himself tempted to grow it but it was a late-ripening variety and required a better type of soil.

Sir Sorabji Mehta thought that the Department should take no action on the matter. If the cultivator got a better price for it, he would go on growing it.

Mr. Banerjee said he did not agree with Sir Sorabji, for, if five years hence, the mixture grow bigger, the Central Provinces cotton would get a bad name. He thought that, if it was a potential evil, steps should be taken to stop it.

Mr. Kolhe said that in his opinion Deputy Directors should be asked to find out what area was under Garrowhill in their respective circles and to keep a watch on its progress so that it did not surpass the danger point.

The Chairman said it would be inadvisable to advertise this cotton and the best thing was not to recognise it at this stage. The Department would, however, keep an eye on its progress and give figures of area and outturn from time to time.

This was agreed to.

SUBJECT No. 5.—*(Not on the agenda—Mr. Kolhe's Cotton Market Bill.)*

After some discussion, *Rao Bahadur M. G. Deshpande* moved and *Mr. Banerjee* seconded the following resolution :—

RESOLUTION No. 1.—"That this Committee representing the interests of growers supports Mr. Kolhe's Central Provinces Cotton Market Bill as it stands."

The resolution was carried.

(Signed) D. N. MAHTA,
Secretary,
Provincial Cotton Committee, Central Provinces.

APPENDIX XXIII.

SUBJECT 54.—*Provincial Cotton Committees—Proceedings of the Sind Cotton Committee.*

Secretary's Note.

The Sind Cotton Committee was constituted in March 1931 as was already reported to this Committee in July 1931. The minutes of its first meeting held on the 18th February 1932 are attached for information. The Committee discussed several important subjects which included (*i*) the policy to be followed with regard to the extension of the different varieties of cotton in different cotton growing tracts of Sind, (*ii*) multiplication and distribution of seed, (*iii*) removal of cotton stalks from fields against the spreading of boll-worm attack and (*iv*) starting open *mandis* for the sale of cotton and the subject of "Relation between the Indian Central Cotton Committee and the Provincial Cotton Committees" which will separately be considered by this Committee. The Sind Cotton Committee has made a very good beginning and it is hoped that it would continue to take similar interest in future.

SIND COTTON COMMITTEE.

1ST MEETING.

18TH FEBRUARY 1932.

Minutes.

Present :

W. J. Jenkins, M.A., B.Sc., I.A.S., Chief Agricultural Officer in Sind (Chairman).
H. Dow, I.C.S., Revenue Officer, Lloyd Barrage.
Khan Bahadur Azimkhan, Deputy Registrar, Co-operative Societies, Sind.
Bakshi Darshansingh, Southern Jamrao.
Babu Ghulam Mahomed Khan, Northern Jamrao.
A. J. Panas, Karachi Chamber of Commerce.
Seth Issardas Varindmal, Karachi Indian Merchants' Association.
G. B. Kotak, Buyers' and Shippers' Chamber.
Rao Saheb Tharumal Bilaram, Nawabshah.
Mukhi Gobindram Pritamdas, Hyderabad.

The under-noted attended the meeting by invitation :—

Khan Bahadur Gul Mahomed Abdur Rehman, Assistant to Chief Agricultural Officer in Sind.
K. I. Thadani, M.Sc., M.Ag., Botanist in Sind.
K. H. Advani, M.Sc., B.Ag., Cotton Supervisor, Left Bank.
H. A. Idnani, B.Ag., Cotton Supervisor, Right Bank.

SUBJECT (1).—(*a*) *Formation of a Cotton Committee for Sind.*

(*b*) *Cotton Committee for Sind ; Nomination of representatives of cotton growers on the—*

Government Resolution No. 2221, Revenue Department, dated 13th March 1931, approving the formation of a Cotton Committee for Sind and Government Resolution No. 2221, Revenue Department, dated 19th August 1931, nominating representatives of cotton-growers on the Sind Cotton Committee were recorded.

SUBJECT (2).—*Trade Representatives on the Sind Cotton Committee.*

The Chief Agricultural Officer in Sind's Note, giving the names of representatives nominated by trade organisations in Karachi on the Sind Cotton Committee, was recorded.

SUBJECT (3).—*Relation between Indian Central Cotton Committee and Provincial Cotton Committees.*

The Chief Agricultural Officer in Sind gave a resume of the discussion on this subject which took place at the December (1931) meeting of the Indian Central Cotton Committee.

Rao Saheb Tharumal Bilaram suggested that the Indian Central Cotton Committee should be requested to hold one of their half-yearly meetings in Sind in the near future. This was agreed to.

The Chief Agricultural Officer in Sind's Note was recorded.

SUBJECT (4).—*Representation of Sind cotton-growers on the Indian Central Cotton Committee—Action taken at 24th Meeting of Indian Central Cotton Committee, December 1931.*

The Chief Agricultural Officer in Sind's Note was recorded.

Seth Issardas Varindmal proposed that the Sind Cotton Committee should submit its recommendation to the Commissioner in Sind with regard to the nomination of a representative of the Sind cotton-growers on the Indian Central Cotton Committee when and if such representation was granted. This was agreed to.

SUBJECT (5).—*Occurrence of " green stain " in Sind-American Cotton of the Jamrao Tract.*

The Chief Agricultural Officer in Sind's Note and the report received from the Director, Technological Laboratory, Indian Central Cotton Committee, Bombay, on this subject were discussed. *Mr. Panas* and *Seth Issardas Varindmal* explained the attitude of the trade towards the occurrence of "green spot " on Sind-American " phutties " and lint. It was finally agreed that in the absence of any complaint from growers of loss on account of " off " allowances being taken for "green stain " cotton, no action was necessary at present. The results of the tests carried out at the Technological Laboratory, Matunga, on " green stain " cotton should be brought to the notice of trade organisations through the Joint Cotton Committee, Karachi.

SUBJECT (6).—*Cutting and destruction of cotton stalks left in fields after picking is completed as a measure of checking attack by insect pests. Proposal by D. M. Bakshi, Esq.*

Mr. Bakshi's proposal and the Chief Agricultural Officer in Sind's Note were considered. It was agreed that, at present, the only practicable line of action was by means of propaganda and educative work by the Agricultural Department to induce zamindars to remove the cotton stalks from their fields after harvest.

SUBJECT (7).—*Encouragement of green-manuring in cotton-growing tracts. Proposal by D. M. Bakshi, Esq.*

Mr. Bakshi's proposal and the Chief Agricultural Officer in Sind's Note were considered.

The Chief Agricultural Officer in Sind explained that proposals for the exemption of green-manure crops, i.e., scheduled crops grown and ploughed into the land before the 15th September, from assessment had been submitted to Government and orders were awaited.

SUBJECT (8).—*Proposals by Rao Saheb Tharumal Bilaram regarding separation of cotton seed of second picking in ginneries for sowing purposes.*

Rao Saheb Tharumal Bilaram's proposal was considered.

Mr. Panas considered it impracticable and pointed out that zamindars, desirous of obtaining pure, selected seed of second picking, would have no difficulty in obtaining the same from the ginneries by special arrangement. The Chief Agricultural Officer in Sind pointed out the drawbacks to any system of "certification" of seed and stated that the future policy of the Agricultural Department with regard to seed distribution would be discussed under another subject on the Agenda.

It was decided that no action could be taken on the lines of Rao Saheb Tharumal Bilaram's proposal.

SUBJECT (9).—*Consideration of the Policy of the Agricultural Department with regard to the extension of different varieties of improved cottons in the different cotton-growing tracts in Sind.*

The Chief Agricultural Officer in Sind's Note and the decisions of the Staff Conference of the Agricultural Department (November 1931) in this connection were considered.

Mr. Panas considered that the proposed policy was a step in the right direction and should be approved fully. He stated that there would be no difficulty in disposing of two lakhs to two and a half lakhs of bales of Sind *deshi* cotton and that the area under this variety could suitably be increased to four lakhs of acres without glutting the market. He also pointed out that there was a practically unlimited demand for long-stapled cottons and that their cultivation in separate areas should be encouraged.

In reply to a query by Mr. Dow, the meeting agreed that the cultivation of improved varieties of cotton on the Right Bank could be encouraged by lower rates of assessment for this crop. The policy of the Agricultural Department as laid down in the Note was approved.

SUBJECT (10).—*Consideration of suitable schemes for multiplication and distribution of seed of improved varieties of cotton.*

The Chief Agricultural Officer in Sind's Note and the decisions of the Staff Conference of the Agricultural Department (November 1931) in this connection were considered.

The policy of the Agricultural Department, as laid down in the Note, was approved.

Seth Issardas Varindmal proposed that one non-official member should be added to the Sub-Committee proposed to consider the final stages of seed distribution through co-operative agencies. This was agreed to.

SUBJECT (11).—*Future programme of work of the "Cotton Extension Scheme" on (a) Right Bank, (b) Left Bank, financed by the Indian Central Cotton Committee.*

The proposed programme of work was approved.

SUBJECT (12).—*Possible future lines of research on the improvement of cotton agronomy and cultivation in the Barrage areas.*

The Chief Agricultural Officer in Sind's Note and the decisions of the Staff Conference of the Agricultural Department in Sind (November 1931) in this connection were considered and approved.

SUBJECT (13).—*Cotton Improvement in India. Suggestions of Karachi Indian Merchants' Association.*

Letter No. 1062, dated 23rd December 1931, from the Secretary, Karachi Indian Merchants' Association, Karachi, to the Secretary, Indian Central Cotton Committee, was considered. Most of the points raised in the Association's letter had been dealt with under other items on the Agenda of the meeting.

The Chief Agricultural Officer in Sind produced figures showing the rates at which departmental cotton seed had been sold to zamindars in comparison with ginnery rates over the past four years. It was agreed that the rates charged by the Department were reasonable.

SUBJECT (14).—*Annual Report of the Dhulia Cotton Market for the year 1930-31.*

The Report was recorded.

Rao Saheb Tharumal Bilaram suggested that steps should be taken at once to open cotton "mandis" in the Barrage areas of Sind. *Seth Issardas Varindmal* pointed out that, owing to deficient transport and road facilities, this could not be done successfully at present. Rao Saheb Tharumal Bilaram was requested to put up concrete proposals at the next meeting of the Committee.

SUBJECT (15).—*Any other business.*

(*a*) *Mukhi Gobindram Pritamdas* proposed a resolution to the effect that the Barrage authorities should be requested to expedite the soaking of canals and water-channels so that an early supply of water would be available for cotton sowing in the coming *kharif* season.

Mr. Dow said that he was certain that the Barrage authorities were already doing all possible in that direction.

It was agreed that the resolution should be brought to the notice of the Chief Engineer in Sind by the Chief Agricultural Officer in Sind.

(*b*) *Mr. D. M. Bakshi* proposed that the Indian Central Cotton Committee should be requested to grant a loan for the purpose of opening seed depots and stores in the cotton growing tracts. It was generally considered that, pending the full organisation of seed supply, the proposal was premature but Mr. Bakshi was asked to place detailed proposals before the next meeting.

(*c*) *Seth Issardas Varindmal* proposed that the number of meetings of the Committee to be held during the year should be increased and that a regular constitution and rules for the working of the Committee should be drawn up.

It was decided that a meeting of the Committee should be arranged for whenever there was a sufficient number of subjects—or any specially important subject—in relation to cotton-growing to be discussed. The Chief Agricultural Officer in Sind stated that he was prepared to submit draft rules, etc., for consideration at the next meeting of the Committee.

(Signed) W. J. JENKINS,
Chief Agricultural Officer in Sind and
Chairman, Sind Cotton Committee.

Karachi, 26th February 1932.

APPENDIX XXIV.

SUBJECT 55.—*Provincial Cotton Committees—Proceedings of the Punjab Provincial Cotton Committee.*

Secretary's Note.

Attached is a copy of the Proceedings of a Meeting of the Punjab Provincial Cotton Committee held on the 4th May 1932. Subjects 1 and 2 of these Proceedings are being dealt with separately by the Agricultural Research Sub-Committee and its recommendations will be found in its report to the Indian Central Cotton Committee.

Proceedings of a meeting of the Provincial Cotton Committee, Punjab, held in the office of the Director of Agriculture, Punjab, at 10 a.m. on the 4th of May 1932.

Present:

1. D. Milne, Esquire, B.Sc. (Agri.), C.I.E., I.A.S., Director of Agriculture, Punjab, Chairman.
2. Mian Ahmad Yar Khan Daultana, M.L.C., Multan District.
3. Rai Bahadur L. Sewak Ram, M.L.C.
4. H. R. Stewart, Esquire, I.A.S., Assistant Director of Agriculture, Punjab.
5. Sardar Darshan Singh, I.A.S., Deputy Director of Agriculture, Hansi.
6. Khan Bahadur M. Fateh-ud-Din, I.A.S., Deputy Director of Agriculture, Jullundur.
7. D. P. Johnston, Esquire, I.A.S., Professor of Agriculture, Lyallpur.
8. Sardar Sahib S. Kharak Singh, I.A.S., Deputy Director of Agriculture, Gurdaspur.
9. Agha Yusaf Ali Khan, P.A.S., Deputy Director of Agriculture, Montgomery.
10. Rai Sahib L. Jai Chand, I.A.S., Associate Professor of Botany, Lyallpur (by invitation).
11. Muhammad Afzal, Esquire, P.A.S., Offg. Cotton Research Botanist, Lyallpur.

Agenda.

1. Scheme for the investigation of the Cotton Root-rot disease in the Punjab (Annexure A).
2. Schemes for clean picking and growing of improved varieties of cotton (Annexure B).
3. Any other business.

The Chairman read out letter No. 12596, dated 22nd April 1932 (Annexure C), received from Mr. W. Roberts of the British Cotton Growing Association, Khanewal, stating his inability to attend the meeting as he hoped to sail from Bombay on the 30th April 1932; making certain comments on the various items of the agenda; and suggesting a new item for the consideration of the Committee. The Chairman said that the item suggested by Mr. Roberts would be taken up at the conclusion of the items on the agenda as they stand at present.

S. S. Ujjal Singh, M.L.C., also expressed his inability to attend the meeting.

Re: Item No. 1.—The Associate Professor of Botany had submitted a scheme for the study of the cotton root-rot disease—a copy of which was sent to all the members of the Committee.

The scheme was carefully gone into and revised after a good deal of discussion. It was then agreed that the revised scheme be forwarded to the Indian Central Cotton Committee with a request for a grant to cover the cost of the scheme in order to enable the Department to take up this important piece of research work.

The revised scheme is attached herewith (Annexure D).

Re: Item No. 2.—To facilitate discussion on this item it was divided into the following two parts :—

(*a*) Prize schemes for clean picking.
(*b*) Prize schemes for the growing of improved varieties of cotton.

Re: (a).—The Chairman read out a letter No. 3181, dated 27th February 1932, from the Secretary, Indian Central Cotton Committee, to his address and its enclosure, which had been circulated to all the members of the Committee. He personally felt that prizes for samples of cotton exhibited at shows would fail to attain the object in view, as they are no true indication of how clean the exhibitors have picked the bulk of their cotton crop.

Rai Bahadur Sewak Ram said that prizes need not necessarily be awarded at shows; but they should be given to zamindars who enter for the competition and who can show large quantities of clean picked cotton. The staff of the Agricultural Department should inspect the stocks in their godowns.

The Chairman said that unfortunately our district agricultural staff has been considerably reduced recently and they are not now numerous enough to inspect the large number of holdings with the frequency necessary to discuss the condition in which each farmer has picked the bulk of his crop. He, therefore, felt that the suggestion given above is not practicable under the circumstances.

Rai Bahadur Sewak Ram suggested that we might revert to the old scheme of cotton auctions. The Department should advertise that in the month of, say, January in a certain mandi prizes will be awarded, according to the standard laid down, to zamindars who bring in clean cotton. The minimum weight of a sample can be fixed. He further explained the procedure of the cotton auctions when they used to bring in cart-loads of cotton for sale to mandis.

Mian Ahmad Yar Khan said personally he considered the scheme a very good one but it was not practicable. He thought that the scheme is for the benefit of the agriculturist. As 80 per cent. of the cotton is sold in villages to middlemen who bring it to mandis, he feared that it would have an irritating effect on zamindars; there would be many complaints and the Department would become unpopular.

Deputy Director of Agriculture, Jullundur, said that enquiries should be made from the Indian Central Cotton Committee as to how the conditions of picking have altered. Another thing to be enquired into was whether the cost involved in picking cotton clean will be covered by the premium a farmer would get for his clean picked cotton.

Professor of Agriculture said the premium usually got is 4 to 8 annas per maund and that his enquiries showed that at present it does not pay farmers to have his cotton picked clean.

Deputy Director of Agriculture, Montgomery, suggested that the scheme might be tried in the controlled area of the Nili Bar.

Chairman said the cotton auctions mentioned by Rai Bahadur Sewak Ram were not altogether an unmixed blessing. If cotton rates were good on the particular day of the auction every one was happy; but if rates happened to have fallen on the day of the auction zamindars were dissatisfied. He was, therefore, not in favour of reviving these auctions. He agreed with Mian Ahmad Yar Khan that a very large percentage of cotton is sold in village and thus the cotton brought in mandis is not brought in by farmers themselves. Consequently there would be difficulty in ensuring that the prizes really went to growers. Regarding the Deputy Director of Agriculture, Montgomery's suggestion he said that under the scheme of Peasant Grants for good husbandry in the Nili Bar Colony one rectangle has been reserved in each of 20 villages in the Colony and is to be allotted in half rectangle grants to the tenants of the villages concerned who farm their holdings best during the year and who followed the methods advocated by the Department. He, however, expressed his doubts whether a trial there would be of any use as even in that locality there was insufficient staff to visit all holdings with sufficient frequency to see a large proportion of the *kapas* without restricting farmers as to the dates they may sell it.

He said that the Deputy Director of Agriculture, Gurdaspur, had suggested that a premium might be offered to the buyer of clean cotton, but he did not agree with this proposal as the buyer would endeavour to buy clean *kapas* only when it pays him to do so, and the sums of money which he has at stake are so large that no small prize such as we can offer will compensate him for ignoring the possibilities of immediate profits. If farmers bring dirty cotton to the market the middleman buyer merely pays less for it and still gets his profits. It is the farmer and the spinner who lose. The Chairman was of opinion that the most effective remedy lies in the hands of the spinner. He is the man who fixes the prices that middlemen can pay for different classes of cotton, and if he will pay a sufficiently higher rate for clean than for dirty cotton he will get cleaner cotton. He felt that the Indian Central Cotton Committee can assist in getting cleaner picked cotton for the spinners and also in reducing the present practice of mixing *Desi* and American lints by agreeing to help us in subsidising Zamindara Co-operative Sale Societies as proposed in the scheme laid before them in July 1930. The main objection which the Indian Central Cotton Committee had to supporting that scheme was our proposal that the Co-operative Sale Societies should sell wheat, oilseeds and other farm products as well as cotton. They did not feel that the Indian Central Cotton Committee money should be spent on work other than cotton. In this connection he pointed out that they are now entering into an agreement with the Imperial Council of Agricultural Research to help to finance a scheme of costs of raising crops (including all main crops), and he did not see why they should not enter into a scheme to help to finance sales of crop produce, including cotton. He also drew attention to the fact that in one of the provinces they are subsidising investigations on crops other than cotton—the reason being that those crops affect the cotton crops' rotation.

As regards Co-operative Sale Societies he reminded the members that this Committee passed the following resolution on the subject in 1930 :—

> "That this Committee recommends that instead of organising societies for the production and marketing of pure Punjab-American cotton only, Zamindara Societies which will sell all farm crop produce, including Punjab-American cotton, shall be started on the lines of the Okara Zamindara Association, and that the Indian Central Cotton Committee may be requested to kindly contribute up to Rs. 5,000 for one year for work in organising and starting such societies. This money will probably be utilised in paying part salaries of the organising Secretaries, Graders, etc. The societies will be generally supervised by the Agricultural and Co-operative Department and their accounts will be audited".

To this we received the following reply from the Indian Central Cotton Committee :—

> "The Indian Central Cotton Committee at its meeting held on the 1st July decided to adhere to its original scheme, viz., that the Committee would pay half the cost of a full time officer and staff to organise Co-operative Sale Societies up to a maximum of Rs. 5,000 for one year for the production and marketing of pure American cotton".

The Chairman thought that we might again recommend the above scheme to the attention of the Indian Central Cotton Committee.

Deputy Director of Agriculture, Jullundur, suggested that instead of awarding prizes we should engage additional staff with this money, who should do propaganda advocating the growing of improved cottons and clean picking.

Deputy Director of Agriculture, Montgomery, while reiterating his proposal of trying the scheme on the peasant grants as above suggested, stated that we might take one tehsil first. This was not agreed to on account of insufficient district agricultural staff.

Professor of Agriculture suggested that a certain number of mandis might be selected in different parts of the province and we should fix certain dates for awarding prizes (dates not to be notified) during the months of December and January when the bulk of the cotton comes to the market, send our officers to those mandis and award the prizes on these dates. He said that the fact that the Agricultural Department will give prizes for clean picked cotton on any day during these two months must be well advertised.

Chairman said that his objections to this proposal were :—

(*a*) 80 per cent. of the cotton never goes to the mandis at all by the farmer himself,

(*b*) a large part of the cotton which goes to the mandis does not belong to the farmer. Under these circumstances he thought it will not be the farmer who will benefit by this scheme.

Cotton Research Botanist agreed with the Professor of Agriculture. He said that in the beginning it does not matter to whom the prize goes whether he be a zamindar or a middleman. He was sure that as time goes on and this fact gets wide publicity the zamindar will benefit ultimately.

R. B. Sewak Ram also supported the idea of the Professor of Agriculture.

Mian Ahmad Yar Khan said that those people who bring cotton in mandis are not zamindars. The best thing will be to ask the Deputy Director of Agriculture to visit villages and award prizes there.

Chairman pointed out that unless there is sufficient agricultural staff to inspect all holdings concerned sufficiently frequently to ensure fair awards, this scheme would cause great dissatisfaction, and the Departmental staff will be accused of corruption.

Deputy Director of Agriculture, Jullundur, said if a trial is going to be made it should be done at a place where growers bring their cotton to mandis. He suggested that Jullundur would be a suitable place for this purpose as there is only one factory and the zamindars bring their cotton there.

Chairman enquired how this scheme would be worked that in case a trial was made at Jullundur.

Deputy Director of Agriculture, Jullundur, replied that he would depute staff for this purpose to the factory but admitted that we had no staff to spare for this work to be done on any scale at present. This suggestion was considered unworkable for want of sufficient district staff in the Department.

Professor of Agriculture suggested that in order to meet the objection that zamindars will not benefit if prizes are awarded in mandis, a principle could be laid down that prizes will be given for the cotton marketed by the zamindar himself. In this way other people would be excluded ; also it will act as an inducement to the cultivator to market his own cotton.

R. B. Sewak Ram said this was an exceedingly good idea of the Professor of Agriculture, a trial may be given to this method to encourage growers of pure cotton.

Deputy Director of Agriculture, Hansi, raised an objection to the suggestion that dates of awarding prizes would be kept secret. He said in this way we might miss the best cotton.

Deputy Director of Agriculture, Jullundur, agreed with the Deputy Director of Agriculture, Hansi. Professor of Agriculture felt that as we had not staff enough to enable us to have men stationed at the mandis all the season the dates of prize giving would have to be kept secret, if the scheme was going to do any good.

After discussion the following resolution was unanimously agreed to :—

RESOLUTION.—That the Indian Central Cotton Committee should be approached again with a request for a grant of money to assist in organising societies for the production and marketing of all farm crop produce including Punjab-American cotton.

Regarding (*b*) Prizes for the growing of improved varieties of cotton.

Chairman said that experience gained in this province seems to indicate that there is no necessity for such prizes. The success which has attended the introduction of American cotton and improved strains of *desi* in the Punjab clearly indicates that when a really improved variety of cotton, i.e., one which has financial superiority, is placed in the hands of the zamindar aided by properly laid out demonstration plots on farmers' lands it quickly establishes itself and is taken up very rapidly without any other inducement, in spite of the fact that we always sell our seeds above market rates for ordinary seeds.

Professor of Agriculture suggested that the Indian Central Cotton Committee should be asked to subsidise our seed supply. In order to get pure seed we have to pay a premium to growers. 30,000 maunds of pure cotton seed were sold last year and if market rates are charged more could be sold.

After discussion the suggestion was approved by the members present and the following resolution was passed :—

That this Committee ask for a grant of Rs. 25,000 to enable the Department to sell the cotton seed at a price nearer the bazar rate.

It was agreed that this will increase the area of unmixed varieties of cotton grown in the province, and will contribute to a better class of cotton being put on the market.

It was agreed that with the present reduced district agricultural staff it would not be practicable to award prizes for the introduction of pure improved varieties.

Regarding Item No. 3.—Mr. Roberts' letter was taken up.

As regards his suggestion to ask for assistance from the Indian Central Cotton Committee for large scale spraying experiments for the "White-fly". After hearing the results got by spraying, it was unanimously agreed that this should be done. It was agreed that the Entomologist should be asked to put up a scheme in this connection and that that scheme should be circulated to members for opinion. Cotton Research Botanist suggested that a grant should be obtained from the Indian Central Cotton Committee in order to study the life history and control measures of the Spotted Bollworm. He said that last year was a very bad year and that an investigation was urgently needed.

Chairman said that the Entomologist was already doing some work on this pest.

Assistant Director stated that no control measures have so far been devised to exterminate this pest. Last year he enquired from Mr. Afzal Hussain who said that the only control measure he could suggest was to pass a rope through a cotton field and cause the affected bolls containing the spotted bollworm to fall to the ground, then irrigate the field and drown the worms in this way.

It was agreed to ask the Entomologist to report on the work already done, if desirable to put up a scheme for further investigation into the life history and control measures of the spotted bollworms : the scheme to be linked up, if possible, with the present Pink Bollworm Scheme.

ANNEXURE A.

SCHEME FOR INVESTIGATION OF THE COTTON ROOT-ROT DISEASE IN THE PUNJAB.

Cotton is one of the most important staple crops of the Punjab. It occupies an area of 2¼ million acres including both American and indigenous (*Desi*) cottons.

One of the diseases from which the crop has been seriously damaged is what is described as Root-Rot. This disease affects the roots almost exclusively and brings about at first wilting of the shoots and then death of the entire plant. It attacks both American and *Desi* cottons, mainly in the canal irrigated tracts. The damage caused by the disease to the cotton crops has been found to vary a great deal in different fields. Observations made on the cotton area on the Sargodha Agricultural Farm show that the percentage of the crop affected varies from 1–15 in different fields ; while that on the Lyallpur Agricultural Farm, on the average it amounts to 3·3 per cent. Similarly in the Botanical area about 6 per cent. of the crop grown has been found attacked by the Root-Rot disease. In some plots as much as 30 per cent. of the plants were killed by the disease. Reports received regarding the occurrence of the disease in zamindars' fields have shown that the disease occurs almost everywhere in the Province where cotton is grown, and incidence of the disease varies to a great extent. In some cases the damage reported was very heavy. Taking into consideration the extent of the disease for the whole Province it can be, at a moderate estimate, put down to about 3 per cent. On this basis the area of cotton crop damaged by the disease would, therefore, be 82,500 acres, taking 2¾ million acres as the total cotton crop grown in the Province. If 5 maunds be taken as average outturn per acre and Rs. 7 as the price of cotton per maund, total value of the cotton crop destroyed by the Root-Rot disease would amount to 82,500 acres × Rs. 35 = Rs. 28,87,500. It is evidently a very heavy loss.

But if individual cases of loss are taken into consideration the loss to the cotton grower would be considerable. Generally 4–6 acres of cotton per square are cultivated and in some cases the damage as observed has been found no less than 15–20 per cent.

In view of the heavy loss caused by the disease to some individual zamindars and the entire Province, the Root-Rot disease has been a matter of serious attention. Some investigations have been carried on in the Botanical Section of the Agricultural College Research Institute, Lyallpur, and a brief note on the observations made is appended herewith.

But as the investigation has not been conclusive and the problem is of great economic importance, it is essential to undertake a regular research of the disease to find out its cause and measures of control. The problem requires to be investigated under the following headings :—

(1) A study of the life history of the fungus causing the disease, and mode of its attack.
(2) Isolation and inoculation experiments, including the study of physiological behaviour of causal organisms on plants and in cultures.
(3) Study of the climatic and soil factors influencing the disease.
(4) Control measures, i.e., remedial and preventive.

It is proposed that the investigation be carried out at the Punjab Agricultural College and Research Institute, Lyallpur, under the supervision and guidance of the Professor of Botany and that the scheme be financed by the Indian Central Cotton Committee to whom application for provision of necessary funds may be made.

The investigation will involve a detailed study of the problem as outlined above and would take at least three years to arrive at some definite conclusions.

Staff and Expenditure.

		Total for three years. Rs.
1.	A Mycologist with suitable foreign qualifications at Rs. 300 per mensem..	10,800
2.	One Laboratory Attendant at Rs. 20—1—22	756
3.	Travelling allowance at Rs. 300 per annum	900
4.	Casual labour at Rs. 200 per annum	600
5.	Contingencies at Rs. 150 per annum	450
	Total ..	13,506

Necessary apparatus is available in the Botanical Section for Mycological research and will be supplied.

For the purpose of making observations and carrying out experiments on cotton fields outside Lyallpur, certain amount of travelling would be necessary. Therefore provision has been made to meet this cost.

A sum of Rs. 150 a year is proposed to meet contingent expenditure.

A Brief Note on the Observations made on the Root-Rot Disease of Cotton at Lyallpur.

Investigation of the cotton Root-Rot trouble has been carried on since 1911. Observations made on the diseased roots showed the presence of a fungus, as both hyphæ and spores were found in plenty in the affected portions of the plants. Dr. Butler, Imperial Mycologist, also had been studying it and the preliminary results obtained by him pointed to the occurrence of a soil fungus of the nature of Fusarium. But nothing definite was established regarding causal organism. The problem remained undecided and no further light has since been thrown on the presence of any effective parasitic fungi, as inoculation of healthy plants failed to produce the disease.

2. Cotton diseases similar to the Root-Rot found in the Punjab are known to occur in the Central Provinces, Bombay and other cotton growing tracts in India as well as in America. Although their symptoms are identical, i.e., the diseased plants show wilting preceding their death, yet they are attributed to different types of fungi.

3. Observations made on the diseased plants in Lyallpur and other places in the Punjab have shown that the course of the disease is as follows :—

The disease first begins to appear in the last week of June, i.e., 2-2½ months after sowing. The affected plants are characterised by the wilting of the leaves and drooping of the branches. The attack continues to spread, and the disease travels in a circle involving healthy plants. The wilted plants ultimately dry up and a prominent patch of dead plants becomes noticeable in the fields. The disease proceeds up to the middle of September, although the severity of the attack begins to decline some time in August. Crops grown on heavy soils which are not well aerated, and sandy and poor portions of the field have been found to bear most of the diseased plants. It appears that the particular types of soil are more favourable for the disease.

4. With regard to the relation of the disease to the soil it was further discovered that wherever wilting took place there was a bed of "Kankar" (nodules of calcium carbonate) in the soil. "Kankar" bed is, in many cases, a hard compact layer and it was thought

that it might interfere with the growth and functions of the root system. In other words, besides the trouble being pathogenic it might be physiological as well. The experiments carried out for the study of this factor have shown that in plots in which "Kankar" bed was removed death rate due to root-rot was considerably diminished, although the disease was not eliminated.

5. *Variation in the extent of the attack of different types of cotton.*—Studies made in this respect show a great deal of variation in the amount of attack of cotton plants in the same fields. Some plants escape the disease while others close to them were attacked. Seed of plants which remained unaffected, when sown, did not produce plants resistant to the disease. They also became affected.

Indigenous (*desi*) cottons have been found to be more attacked than American types. Then Multani cottons (Gossypium Sanguineum) are more susceptible than other Desi types. There is a certain degree of resistance shown by different types of cottons.

ANNEXURE B.

Copy of a letter No. 3181 of 1932, dated 27th February 1932, from the Secretary, Indian Central Cotton Committee, Bombay, to the Director of Agriculture, Punjab, Lahore.

SUBJECT.—*Prize schemes for clean picking and growing of improved varieties of cotton.*

I have the honour to invite your attention to my Circular No. 4533, dated the 27th March 1928, in which the views of Provincial Agricultural Departments were invited on the subject of the award of prizes to encourage the cleaner picking of cotton and the introduction of improved varieties by individuals and societies. The replies received to this reference indicated a lack of enthusiasm generally on the part of the Agricultural Departments concerned and under the circumstances my Committee did not proceed further with the matter.

2. Since the above reference was made, conditions have altered and some Provincial Agricultural Departments have now expressed themselves distinctly in favour of the Committee financing schemes having for their object the award of prizes for clean picking and growing of improved cottons. My Committee has, accordingly, come to the conclusion that the time is now ripe for re-opening this question, but before proceeding further it would welcome an expression of opinion on the proposal from Provincial Agricultural Departments, as the successful working of any scheme, such as that contemplated, will mainly depend on them.

3. The general outlines of the scheme are contained in my Circular No. 4533, dated the 27th March 1928, a copy of which is enclosed for ready reference, and I shall be obliged if you will favour me with your views so as to reach me not later than 31st May 1932 to enable me to place them before the Agricultural Research Sub-Committee at its monsoon meeting.

Copy of Circular No. 4533, dated the 27th March 1928, from the Deputy Secretary, Indian Central Cotton Committee, Bombay, to all the Directors of Agriculture.

Representations have been made at various times to the Indian Central Cotton Committee that the Committee should award prizes to encourage the cleaner picking of cotton and also for the introduction of improved varieties by individuals and societies. These have always been ruled out because the funds of the Committee cannot, by the Cotton Cess Act, be used for propaganda purposes. Recently, however, some of the Trade Members have again brought up the subject and I have been directed to draw up a scheme to put before the next meeting of the Committee. In the event of the scheme being approved, the Government of India will be approached to allow the Committee funds to be employed for this purpose either by a modification of the Act or under the head of marketing which is a legitimate charge on the funds.

2. Mr. Ellis Jones, Vice-President, agreed with me that the Agricultural Departments and the States represented on the Committee should be asked to give their views as they were better able to know their own requirements and on receipt of their replies a comprehensive prize scheme will be drawn up for presentation to the Committee.

3. The Committee would make a grant to the Province or State and it would be left to the Agricultural Departments to make the awards in the manner most convenient to them. The prizes might take the form of a *Sanad* and a medal in addition to a cash

prize but these are matters on which your views are solicited. The prize for clean picking would, I presume, be given at one of the Agricultural Department shows or exhibitions though the samples would have to be large enough to prevent the possibility of special care being taken of them.

4. The prizes under the second category would be given to the growers of the largest area of an improved variety introduced by the Agricultural Department, though in this case the big zamindars would invariably obtain them. In order to give the smaller cultivator a chance of competing, it would be necessary, I think, to give separate prizes for small areas and I would ask for your views on the best method of doing this. The Committee do not wish to add to the work of the Agricultural Departments and for this reason thought it best to follow as far as possible the schemes outlined by them.

5. Another suggestion was made that prizes should be given to individual members of Co-operative Producing and Sale Societies who produced the best samples of an improved cotton. The Committee are of opinion that the money allotted for this purpose should be utilised to encourage the cleaner picking of the crop and for individual efforts in the introduction of improved varieties, but they are quite open to consider any other scheme put forward.

6. I am directed to put before you the above suggestion and I would be obliged for your views particularly on the best method of awarding the prizes and the amount you consider it necessary to give.

7. I should be obliged if you would favour me with a reply in sufficient time to enable me to put up a scheme to the Standing Finance Sub-Committee for their approval before the monsoon meeting of the full Committee.

ANNEXURE C.

Copy of a letter No. 12596, dated 22nd April 1932, from W. Roberts, Esquire, B.C.G.A., Khanewal to the Director of Agriculture, Punjab.

Reference your No. 37/63-748-V, of the 21st instant. I regret that I will not be able to attend the Provincial Cotton Committee on 4th May 1932 as I am hoping to sail from Bombay on the 30th April 1932.

I have received the Agenda and would wish to make the following comments :—

1. *Root-rot.*—I would strongly support this investigation. Some of the preliminary observations are misleading, i.e., the disease being found in stiff soils and in light soils. Further I was under the impression that Dr. Butler failed to identify any "fusarium" actually on the root or on the plant. I suggest your people make certain of their facts before bringing the case to the Indian Central Cotton Committee or better perhaps omit such details, deal only with the incidence percentage.

2. *Clean picking and improved varieties.*—I cannot see any clear advantage in this proposal except as a means of extracting money from the Indian Central Cotton Committee. Of the two proposals the growing of new varieties is the one it might pay to subsidize.

3. I suggest asking for assistance for large scale spraying experiments for the "White-fly". These on a small scale appear to be definitely beneficient, a large scale programme is now necessary.

ANNEXURE D.

Scheme for Investigation of the Cotton Root-pest Disease in the Punjab.

Cotton is one of the most important staple crops of the Punjab. It occupies an area of 2¼ million acres including both American and indigenous (*desi*) cottons.

One of the diseases from which the crop has been seriously damaged is what is described as root-rot. This disease affects the roots almost exclusively and brings about at first wilting of the shoots and then death of the entire plant. It attacks both American and *desi* cottons, mainly in the canal irrigated tracts. The damage caused by the disease to the cotton crops has been found to vary a great deal in different fields. Observations made on the cotton area on the Sargodha Agricultural Farm show that the percentage of the crop affected varies from 1·15 in different fields; while that on the Lyallpur Agricultural Farm, on the average it amounts to 3·3 per cent. Similarly in the Botanical area about 4 per cent. of the crop grown has been found attacked by the root-rot disease.

In some plots as much as 30 per cent. of the plants were killed by the disease. Reports received regarding the occurrence of the disease in zamindars' fields have shown that the disease occurs almost everywhere in the Province where cotton is grown, and incidence of the disease varies to a great extent. In some cases the damage reported was very heavy. Taking into consideration the extent of the disease for the whole Province it can be, at a moderate estimate, put down to about 2·5 per cent. On this basis the area of cotton crop damaged by the disease would, therefore, be 56,250 acres, taking 2¼ million acres as the total cotton crop grown in the Province. If 4 maunds be taken as average out-turn per acre and Rs. 7 as the price of cotton per maund, total value of the cotton crop destroyed by the root-rot disease would amount to 56,250 acres × Rs. 28 = Rs. 15,75,000. It is evidently a very heavy loss.

But if individual cases of loss are taken into consideration the loss to the cotton grower would be considerable. Generally 4-6 acres of cotton per square are cultivated and in some cases the damage as observed has been found no less than 15 to 20 per cent.

In view of the heavy loss caused by the disease to some individual zamindars and to the entire province, the root-rot disease is a matter for serious attention. Some investigations have been carried on in the Botanical Section of the Agricultural College Research Institute, Lyallpur, and a brief note on the observations made is appended herewith.

But as the investigation has not been conclusive and the problem is of economic importance, it is essential to undertake a regular scheme of research to find out the cause of the disease and measures for its control. The problem requires to be investigated under the following headings :—

(1) A study of the life history of the organism or/and conditions causing the disease.
(2) Isolation and inoculation experiments of causal organisms if any on plants and in cultures.
(3) Study of the climatic and soil factors influencing the disease.
(4) Control measures, i.e., remedial and preventive.

It is proposed that the investigation be carried out at the Punjab Agricultural College and Research Institute, Lyallpur, under the supervision and guidance of a committee consisting of the Associate Professor of Botany, the Agricultural Chemist, the Agricultural Bacteriologist, and the Professor of Agriculture from the staff of the Lyallpur Institute, and that the scheme be financed by the Indian Central Cotton Committee to whom application for provision of necessary funds may be made.

The investigation will involve a detailed study of the problem as outlined above and would take at least three years to arrive at some definite conclusions.

Extra staff and expenditure required would be :—

		Rs.
1.	An investigator with suitable mycological qualifications at Rs. 300 per mensem	10,800
2.	One Laboratory Attendant at Rs. 20—1—22	756
3.	Travelling allowance at Rs. 300 per annum	900
4.	Casual labour at Rs. 200 per annum	600
5.	Contingencies at Rs. 150 per annum	450
	Total	13,506

The Associate Professor of Botany who has specialised in plant physiology will be in immediate charge.

Necessary apparatus is available in the Botanical Section for mycological research and will be supplied.

For the purpose of making observations and carrying out experiments on cotton fields outside Lyallpur, a certain amount of travelling will be necessary. Therefore, provision has been made to meet this cost.

A sum of Rs. 150 a year is proposed to meet contingent expenditure.

A Brief Note on the Observations made on the Root-rot Disease of Cotton at Lyallpur.

Spasmodic investigation of the cotton root-rot trouble has been carried on since 1911. Observations made on the diseased roots showed the presence of a fungus, as both hyphae and spores were found in plenty in the affected portions of the plants. Dr. Butler, Imperial Mycologist, studied it and the preliminary results obtained by him pointed to the occurrence of a soil fungus of the nature of Fusarium. But nothing definite was established regarding a causal organism. The problem has remained undecided as inoculation of healthy plants failed to produce the disease.

2. Observations made on the diseased plants in Lyallpur and other places in the Punjab have shown that the course of the disease is as follows :—

It began to appear in the last week of June, i.e., 2 to 2½ months after sowing. The affected plants are characterised by the wilting of the leaves and drooping of the branches. The attack continues to spread and the disease spreads in a circle among healthy plants. The wilted plants dry up within a day and a patch of dead plants becomes very noticeable in the fields. The disease continues up to the middle of September, although the severity of the attack begins to decline some time in August.

3. With regard to the relation of the disease to the soil it was further discovered that wherever wilting took place there was a bed of "Kankar" (nodules of calcium salts chiefly carbonate) in the soil. "Kankar" beds are in many cases hard compact layers and it was thought that these might interfere with the growth and functions of the root system. Experiments carried out have shown that in plots in which the "Kankar" bed was removed the death rate due to root-rot was not eliminated.

4. Studies made on the incidence of the disease show a great deal of variation in the intensity of attack on the cotton crop in the same fields. Some plants escape the disease while others close to them are attacked. Seeds of plants which remained unaffected in one year when sown next year did not produce plants resistant to the disease. They also become affected.

Indigenous (*desi*) cottons have been found to be more attacked than American types and Multani cottons (Gossypium Sanguineum) are more susceptible than other *desi* types. Different degrees of resistance may therefore be inherent in different types of cottons.

APPENDIX XXV.

SUBJECT 56.—*Provincial Cotton Committees—Co-operation between the Indian Central Cotton Committee and Provincial Cotton Committees.*

Secretary's Note.

The question of increasing the usefulness of Provincial Cotton Committees received the consideration of the Committee at its meeting held in December last and the following extract from a resolution passed at that meeting was sent to Provincial Directors of Agriculture and their suggestions were invited :—

"That the Central Cotton Committee, while being thoroughly appreciative of the work which some Provincial Cotton Committees have accomplished, feels that sufficient use is not made of these local advisory bodies and recommends that they should be more closely associated with all matters connected with grants from the Committee. . . ."

The Directors of Agriculture, Madras and Bengal have not expressed their views whilst the Directors of Agriculture, Central Provinces and Punjab have no suggestions to offer. Extracts from other replies received are attached and it is now for consideration what further action the Committee can take.

Copy of letter No. S. 28-842, dated the 5th May 1932, from the Director of Agriculture, Bombay Presidency, Poona, to the Secretary, Indian Central Cotton Committee, Bombay.

PROVINCIAL COTTON COMMITTEES.

"With reference to paragraph 7 of your circular letter No. 2239, dated 15th January 1932, on the above subject, I have the honour to observe that the usefulness of a Provincial or Divisional Cotton Committee depends mainly upon two factors :—

(*a*) the personnel and (*b*) the powers.

These Committees have advisory powers only and I do not favour giving them executive powers, but this being so it does not seem reasonable to expect too much from them where there is a competent Department of Agriculture, beyond giving opinions on specific issues and occasionally taking the initiative in raising an issue. I think this initiative could be increased if there were closer contact between the Divisional Committees and the Central Committee. This might be brought about by granting representation on the Central Body to these Divisional Committees".

Extract from letter No. 30/XIIA-73, dated 22nd January 1932, from the Secretary to Government, United Provinces, Agriculture Department, Allahabad, to the Secretary, Indian Central Cotton Committee, Bombay.

"3. I am to add that, if and when the Provincial Cotton Committee is reconstituted, this Government will bear in mind your Committee's desire that such local advisory bodies should be more closely associated with all matters connected with grants from the Indian Central Cotton Committee."

Copy of letter No. 3745/1A-48, dated the 31st March 1932, from the Director of Agriculture, Burma, Rangoon, to the Secretary, Indian Central Cotton Committee, Bombay.

PROVINCIAL COTTON COMMITTEES.

"I have the honour to acknowledge receipt of your letter No. 2239, dated the 15th January 1932, and to state that the Cotton Committee of this province has not met since 1926. On several occasions subsequent to that date members were asked to submit subjects for discussion but none were forthcoming. The province did not accept the legislation relating to Cotton Transport and the Licensing of Ginneries on the grounds that the abuses prevalent in India did not exist in Burma to anything like the same extent. In view of this fact and of the fact that the area under cotton in Burma is small and shows little tendency to increase it would appear to be anomalous to require a special committee for this crop when similar committees did not exist for other and more important crops. The separation of Burma from India is possible at a very early date and in view of this possibility and of the other facts mentioned above I do not consider that any useful purpose would be achieved by resuscitating the committee at the present time."

Extract from letter No. 351-B, dated the 31st May 1932, from the Special Agricultural Officer in Sind, Karachi, to the Secretary, Indian Central Cotton Committee, Bombay.

"2. With regard to paragraph 7 of your circular, reference is requested to this office No. 421, dated 20th May 1932, wherein it has been suggested that in order to bring about closer relation between the two committees, the Indian Central Cotton Committee may be requested to consider at their next meeting the question of holding one of their half-yearly meetings in Sind in the near future; kindly *vide* subject No. 3 of the Minutes of the Sind Cotton Committee in this connection.

Copy of letter No. 201, dated the 18th July 1932, from the Agricultural Adviser, Gwalior Government, Gwalior, to the Secretary, Indian Central Cotton Committee, Bombay.

Referring to your Circular letter No. 2239, dated 15th of January 1932, and subsequent letters Nos. 4674 and 5666, dated 4th of May and 30th of June respectively, I have the honour to reply as follows:—

As recommended by the Indian Cotton Committee of 1919 the Gwalior Darbar have been pleased to appoint Gwalior Cotton Committee, and the same is in existence since July 1923. A copy of rules* governing this Committee is enclosed herein for your information. As time rolled on certain changes were considered to be necessary and a revised draft is now before the council for the necessary sanction.

For various reasons the aforesaid Committee has not been able to meet more than 4 times. Copies of *proceedings of the 3rd and 4th meetings are sent herewith. Copies of 1st and 2nd meetings are out of stock.

After the revised draft of the Gwalior Cotton Committee has been approved and sanctioned by the Council, we hope to meet twice every year and discuss problems which have a bearing on cotton cultivation and cotton marketing.

This Committee will also consider the recommendations made from time to time by the Indian Central Cotton Committee and submit their proposals to the Darbar for necessary sanction.

I shall certainly be very glad to work in co-operation with the Indian Central Cotton Committee and shall put up valuable suggestions offered by your Committee before the Gwalior Cotton Committee.

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* Not printed.

APPENDIX XXVI.

SUBJECT 57.—*Meeting of the Committee at Indore—Proposed postponement of —.*

Secretary's Note.

At its meeting held in July 1928, the Indian Central Cotton Committee unanimously passed the following resolution :—

"That a cold weather meeting of the Indian Central Cotton Committee be held once in three years at Indore."

In accordance with this resolution the first meeting was held at Indore in November 1929 and the second meeting is due this year.

It is for consideration whether, in view of the present financial stringency, it is desirable to hold a meeting at Indore this year.

APPENDIX XXVII.

SUBJECT 58.—*Proposal to hold a meeting of the Committee in Sind.*

Secretary's Note.

The Special Agricultural Officer in Sind has forwarded a recommendation of the Sind Cotton Committee arrived at at its meeting held on the 18th February 1932, to the effect that the Indian Central Cotton Committee should hold one of its half-yearly meetings in Sind in the near future, the object being to establish closer relations between the Indian Central Cotton Committee and the Sind Cotton Committee.

The question of holding meetings of the Committee outside Bombay has been mooted more than once in the past.

In February 1923, when the question was first raised, the advantages and disadvantages of such meetings received full consideration as will be seen from the attached extract* from the minutes of that meeting. Although the proposal was not accepted then, the Committee, in July 1928, unanimously passed a resolution that a cold weather meeting should be held at Indore once in three years. Again at its meeting in July 1930, the Committee decided to accept the invitation of the Punjab Government to hold its cold weather meeting of that year at Lahore, but as the date drew near, the majority of the trade members in Bombay found that it would be difficult for them to leave Bombay, and the proposal had accordingly to be abandoned.

In view of the present attitude of the Committee in the matter of publicity and propaganda, the present would appear to be an opportune time for re-opening this subject.

APPENDIX XXVIII.

SUBJECT 59.—*United Provinces Pink Boll-worm Extension Scheme—Report of deputation to Cawnpore and Lucknow.*

At its meeting held in December 1931 the Indian Central Cotton Committee considered the proposals of the United Provinces Government for the extension of the results of the United Provinces Pink Boll-worm investigation. These proposals entailed a recurring expenditure of Rs. 3,35,000 over a period of five years and provision for machinery at a maximum cost of Rs. 6½ lakhs. The Committee approved of the scheme in general and appointed a Special Sub-Committee to negotiate with the United Provinces Government on the question of capital grant and to report to this meeting.

The Special Sub-Committee consisting of Sir Joseph A. Kay, Messrs. Burt, Milne, Roberts, Chunilal B. Mehta and Ritchie first conferred with the cotton members of the Upper India Chamber of Commerce and officers of the United Provinces Agricultural Department at Cawnpore on the 17th February 1932 and then discussed the scheme with the Honourable the Minister for Education and Agriculture, United Provinces, at Lucknow on the 18th February 1932.

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* Not printed.

Mr. Ritchie on his return from Lucknow addressed a letter to the Government of the United Provinces as suggested by the Secretary to the Government during the meeting and a copy * of his letter and the Government's reply * thereto and also a copy* of the letter from the Honourable the Minister for Education and Agriculture to the President of the Indian Central Cotton Committee are attached for information.

In the circumstances, I suggest that we should accept the decision of the United Provinces Government and take up the subject again at some future date.

Copies of the Minutes* of discussion held at Cawnpore and Lucknow are also attached.

APPENDIX XXIX.

SUBJECT 60.—*Tariff Board Enquiry into the Cotton Textile Industry.*

Secretary's Note.

Members are aware that the Tariff Board addressed the Committee in April last on certain specific points connected with the enquiry into the Cotton Textile Industry, and that a reply drafted by a representative *ad hoc* Sub-Committee appointed by the Local Sub-Committee has already been forwarded to the Tariff Board with a note that the reply contained the considered views of nine members only, and that if the remaining members, who have been circularised, had any fundamental differences of opinion, they will be communicated later on. Eight replies have so far been received. Messrs. D. Milne, F. J. Plymen, F. D. Odell and V. Ramanatha Ayyar agree with the reply sent. Mr. B. C. Burt, Seth Naranlal Jiwanlal, Mr. Y. G. Deshpande and Rao Saheb C. S. Shirahatti have commented on the reply.

The Tariff Board would like to know if the Committee agrees with the reply sent by the Sub-Committee or if any modifications have to be made therein. For convenience of reference copies of the Tariff Board's letter and the Sub-Committee's reply are attached.

The Tariff Board's questionnaire has since been issued. A copy of the questions with which the Committee is concerned in it is attached. It will, however, be seen that the information already supplied by the Sub-Committee covers the points raised in these questions. There does not, therefore, appear any need to send a separate reply to questionnaire.

Copy of letter No. 168, dated the 22nd April 1932, from the Secretary, Tariff Board, Bombay, to the Secretary, Indian Central Cotton Committee, Bombay.

In connection with the Tariff Board enquiry into the Cotton Textile Industry, I am directed to ask that you will be good enough to supply the Board with information on the points noted below :—

(*i*) Please refer to paragraph 81 and Appendix XIII of the Report of the Indian Tariff Board, 1927, and your Committee's pamphlet on Cotton Improvement in India, 1931, Chapter V. What is the present available supply of long staple cotton in India ? What is the net supply available for use in Indian Mills ? What are the counts of yarn in the manufacture of which Indian long staple cotton may be used ?

(*ii*) To what extent is the raw cotton now imported into India of the same quality as Indian long staple cotton ? Does the present import duty on raw cotton materially help the Indian cultivator ?

(*iii*) Does the present position of the world's cotton crops justify the assumption that there is overproduction ? If so, can it be argued that a decline in the output of the Indian mills will adversely affect the Indian cultivator of cotton ? This of course assumes that the countries to which Indian cotton is now exported may obtain increasing supplies of short staple cotton from other countries. It is in fact suggested that such a tendency is already noticeable, especially in the case of Japan.

2. I am to request that the reply to this letter (with six spare copies) may be sent as early as convenient, if possible, not later than the 15th of June.

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* Not printed.

Reply.

Subject.—*Enquiry into the Cotton Textile Industry.*

Before answering the specific questions asked in the letter of the Textile Tariff Board it would be as well to give a short history of the Indian cotton crop since the 1925-26 season when the Committee supplied a note to the previous Board.

It has to be realised at the outset that the year 1925-26 was a record one in the history of Indian cotton, the estimated production (final figures) being 6,215,000 bales, which is 127,000 bales more than the previous recorded figure of 6,088,000 bales in 1924-25, and 2,151,000 bales more than the estimated production of the current season. During the season 1925-26 the short staple and all varieties of long staple crops fared very well, but since then there has been no year in which one or other of the long staple varieties has not been affected by the vagaries of the season. Further the low prices of 1925-26 were largely responsible for the sharp decline in the total area sown from 28·4 million acres in 1925-26 to 24·8 million in 1926-27. This level was maintained in 1927-28, and the area then rose to 27·1 million in 1928-29, fell to 25·9 million in 1929-30 and as a result of low prices in that season again fell to 23·8 million in 1930-31 and 23·5 million in 1931-32. It will thus be seen that both unseasonable weather conditions and reduced area are responsible for the small crops since 1925-26.

The form of the statement defining long and short staple cotton sent in 1926 by the Committee to the Tariff Board was taken from the classification adopted in Annexure II of the Report of the Indian Cotton Committee of 1919 and in order to make the present day figures comparable with those submitted to the previous Board, the same classification has again been adopted. Cotton 7/8″ and over has been classified as long staple while cotton up to 13/16″ has been taken as short staple. For mill purposes, however, many of the types included in the long staple class, due to unevenness in staple or lack of strength, fall short of the definition of long staple cotton given below, *viz.*, that capable of spinning 24s warp counts and above. We therefore attach a second statement showing the quantity of commercial long staple cotton grown in India, i.e., those qualities capable of spinning 24s warp counts and above.

Questions—1 (*a*).—What is the present available supply of long staple cotton in India ?

1 (*b*).—What is the net supply available for use in Indian mills ?

Answers.—My Committee is not quite sure what is meant by the word "available" in the first question. A particular cotton may be available in so far as it may be grown, but it may be unobtainable by the mills because, for one reason, of the malpractice of mixing in the intermediate stage of marketing. Nearly 85 per cent. of the Punjab-American crop in the Punjab is sold by the grower with a maximum amount of approximately 10 per cent. mixture of *desi* cotton, but owing to mixing during the process of marketing the same amount of staple cotton is not available to the trade. My Committee therefore prefers to answer the first two questions 1 (*a*) and 1 (*b*) by giving in two tables firstly the total amount of long staple cotton *produced* in the country and secondly by furnishing an estimate of the amount of commercial long staple cotton *available* for consumption. In the latter case only those types capable of spinning 24s warp counts and above are included. A cotton may be 7/8″ in length but may still be incapable of spinning 24s and is thus excluded from the second table, though it may be found under the long staple classification in the first table.

TABLE I.

Indian Cotton Crops Classified by Staple Lengths.

(In thousands of bales of 400 lbs. each.)

	1931-32 (as estimated in the forecasts).
Long Staple—7/8 inch and above—	
Oomras—	
Hyderabad Gaorani	115
Verum 262	20
Broach—	
Surat-Navsari mostly 1027 A.L.F. (Staple 1″)	103
Others	120

TABLE I—*contd.*

	1931-32 (as estimated in the forecasts).
Long Staple—7/8 inch and above—	
Kumpta-Dharwar—	
Gadag 1 (Staple 1″)	13
Jayawant (Staple 1″)	12
Others	224
Westerns and Northerns—	
Hagari 1 (Staple 7/8″)	28
Nandyal 14 (Staple 15/16″ to 1″)	2
Others	191
Tinnevellys—	
Karunganni C-7 (Staple 1″) / Karunganni others (Staple 7/8″) / Others	140*
Cambodia—	
Coimbatore-2 (Staple 1″)	32
Irrigated Cambodia (Staple 1″)	59
Others	30
Punjab and Sind-Americans—	
289-F (Staple 1″ to 1-1/16″) / 4-F (Staple 7/8″)	231*
Total (Long Staple) ..	1,320
Short Staple—Below 7/8 inch—	
Oomras (part)	1,188
Broach (part)	57
Dholleras	577
Bengals	785
Salems	36
Cocanadas	34
Comillas, Burmahs, etc.	67
Total (Short Staple) ..	2,744
Grand Total ..	4,064

Over a period of ten years previous to the present season, the average of long staple cotton to the total crop has amounted to 26·7 per cent. so that it can be taken that roughly one-fourth of the Indian crop is long staple.

TABLE II.

Classification of Long Staple Indian Cottons capable of spinning 24's Standard Warp Counts and above.

(In thousands of bales of 400 lbs. each.)

	(As estimated in the forecasts.)
Long Staple—7/8 inch and above—	
Oomras—	
Hyderabad Gaorani	115
Verum 262	20
Broach—	
Surat-Navsari mostly 1027 A.L.F. (Staple 1″)	70

* Separate figures not yet available.

TABLE II—*contd.*

	(As estimated in the forecasts.)
Kumpta-Dharwar—	
Gadag 1 (Staple 1″)	13
Jayawant (Staple 1″)	12
Kumpta and Dharwar-Americans	75
Westerns and Northerns—	
Hagari 1 (Staple 7/8″)	28
Nandyal 14 (Staple 15/16″ to 1″)	2
Others	81
Tinnevellys—	
Karunganni C-7 (Staple 1″) / Karunganni others (Staple 7/8″) / Others	140*
Cambodia—	
Coimbatore-2 (Staple 1″)	32
Irrigated Cambodia (Staple 1″)	59
Others	30
Punjab and Sind-Americans—	
289-F (Staple 1″ to 1-1/16″)	8
4-F (Staple 7/8″)	50†
Total (Long Staple) ..	735

The quantity of Indian long staple cotton available to Indian mills for spinning the higher counts is not necessarily that given in the above table for the following reasons :—

(1) It may not be economic for every mill in India to use only Indian cotton for spinning counts above 24s.

(2) The mills spinning higher counts are not all concentrated in areas growing superior types of cottons.

(3) The mills in such areas and inefficient mills may waste superior types in spinning lower counts.

(4) Some quantity of long staple cotton is used in hand spinning and for domestic purposes.

(5) A portion of the long staple crop is exported.

No estimate of the first four factors is possible but the amount of long staple cottons exported from India is ascertainable. The bulk of the long staple cotton exported from India may be taken to be that grown in Madras Presidency. Last year this amounted to 70,000 bales which may be taken as a fair average. If, therefore, the first four factors are ignored, the quantity of long staple cottons produced in India and available for use in Indian Mills amounts this year to 6·65 lakh bales.

Question 1(*c*).—What are the counts of yarn in the manufacture of which Indian long staple cotton may be used ?

Answer.—24's to 32's warp and 26's to 40's weft counts.

Question (*ii*) (*a*).—To what extent is the raw cotton now imported into India of the same quality as Indian long staple cotton ?

Answer.—Below will be found a statement showing the quantities and staple lengths of American, Egyptian and East African Cottons imported into India during the last 2½ years. The only cottons which can be said to compete effectively with Indians are those between 7/8″ and 1″ in length. Except for a crop of 8,000 bales of 1-1/16″ staple grown in the Punjab, India does not so far produce any cotton of greater staple than 1″. It will be seen from the table that the bulk (70 per cent.) of the American cotton imported competes with Indian styles while from Egypt and Africa is imported cotton not grown in India and therefore not competitive.

* Separate figures not yet available.

† Contains up to 10 per cent. mixture.

STAPLE LENGTHS OF IMPORTED COTTONS.

(From 1st September 1929 to 1st May 1932.)

TABLE III.

Americans.

Staple length.	Total number of bales.
Below 7/8″	1,000
7/8″	33,810
29/32″	53,705
15/16″	91,190
31/32″	28,038
1″	8,785
1-1/32″	11,150
1-1/16″	28,800
1-3/32″	13,085
1-1/8″	14,900
1-5/32″	200
Total	284,663

Actual Imports.—

	Bales.
1929-30	12,759
1930-31	128,845
Up to 1st May 1932	168,475
	310,079

TABLE IV.

Egyptians and East Africans.

	Total number of bales. Egyptians.		East Africans.		Remarks.
1″	....		2,200		
1-1/32″	....		....		
1-1/16″	3,875		700	*24,000	*Staple 1″ to 1-1/8″.
1-3/32″	100		....		
1-1/8″	2,981		....		
1-5/32″	....	†5,475	....	†52,167	†Staple 1-1/16″ to 1-3/16″
1-3/16″	3,740	‡8,100	....	....	‡Staple 1-1/8″ to 1¼″.
1-7/32″	....	§2,300	....	....	§Staple 1-9/32″ to 1½″.
1-1/4″	6,968		....	....	
1-9/32″ to 1-15/32″	....	‖1,195	....	....	‖Staple over 1½″.
1½″	955			....	
	4,997			....	
Total	40,686		79,067		

	Actual Imports (in 3½ cwt. bales).	
1929-30	12,387	134,533
1930-31	148,947	179,473
Up to 1st May 1932	94,226	73,580
Total	255,560	387,586

N.B.—The figures of imports of foreign cotton given above have been supplied through the courtesy of importers. From 1st September 1929 to 30th April 1932, 310,079 bales of American Cotton were imported and information regarding their staple lengths has been furnished voluntarily for 92 per cent. of that quantity.

The reason for the meagre information supplied concerning Egyptian and East African cottons is that some importers have not replied to our request for information and some have not kept a record of the staple lengths of the bales imported by them.

Question (iii) (b).—Does the present import duty on raw cotton materially help the Indian cultivator ?

Answer.—The bulk of the Indian crop being short staple, there is no competition from outside sources with cotton less than $\frac{7}{8}$", so that the imposition of an import duty on this type of cotton can have had no effect on the majority of the Indian growers of cotton. There is also no competition in India with cottons over 1" in staple except for the 8,000 bales of 289F of 1-1/16" staple grown in the Punjab. We understand, however, that there may be a great future for cottons of this staple in Sind and the Punjab. For the effect of the duty on the intermediate staples between $\frac{7}{8}$" and 1", there is only the experience of the past eight months to fall back on and this has been a period in which abnormal factors have predominated in the world's markets e.g., a big and high class American cotton crop being dumped on the world's markets and the general trade depression. It is therefore difficult to say to what extent the grower of staple cotton in India has benefited by the duty during this period but under normal conditions and circumstances an import duty on cotton should afford protection to the grower of these staples.

Question (iii) (a).—Does the present position of the world's cotton crops justify the assumption that there is overproduction ?

Answer.—Yes, in the respect that for the present the supply is greater than the demand.

Question (iii) (b).—If so, can it be argued that a decline in the output of the Indian mills will adversely affect the Indian cultivator of cotton ?

Answer.—Yes, it is certainly so in regard to cotton from $\frac{7}{8}$" to 1" because the export demand in regard to such cotton is entirely dependent on its cheapness in comparison with American. What ensures a reasonable price to the grower of such cottons is the Indian mill demand. This was clearly brought out during the seasons 1926-28 when large quantities of cheap low grade American cotton were imported to replace Indian cotton. The position therefore is that a part of the Indian cotton crop, varying from 1 to 2 million bales, will, if not taken up by Indian mills, be dumped on the export market and thus depress it. It can therefore be presumed that a decline in the output of Indian mills will adversely affect the price of Indian cottons of $\frac{7}{8}$" to 1" staple. Past experience also shows that in time of strike in the mills in Bombay and Ahmedabad the general tone of the home markets has not been altogether wholesome. In regard to cottons below $\frac{7}{8}$" there is also a danger of such an adverse effect taking place when a short output of Indian mills coincides with an increase of short staple American cotton due to deterioration.

Question (iii) (b) 2.—Does the Indian cultivator normally get a lower nett price for cotton exported than for cotton sold to mills ?

Answer.—No. The conditions in the markets are such that the grower gets the best price for his produce owing to competition between buyers whether for export or home consumption. The highest bidder obtains the cotton and as roughly half the crop is exported and half used in the country, it is safe to assume that there is no differentiation in rates.

Extract from questionnaire relating to the Tariff Board Enquiry into the Cotton Textile Industry.

10. Please supply any information which you may possess on *(ii)* the main sources and qualities of raw cotton used.

11. Do you consider that a decline in the output of Indian mills either generally or in particular lines of goods will adversely affect the Indian cultivator of cotton :—

(*a*) by reducing the nett demand for Indian cotton, or

(*b*) by discouraging the growth of long staple cotton ?

N.B.—In order to facilitate discussion, some considerations relevant to this question are indicated below. If there is a decline in the production of Indian mills as the result of foreign competition, it may be argued that it will be replaced mainly by imports from Japan which is the largest foreign purchaser of Indian cotton. There will therefore be little, if any, reduction in the nett demand for Indian cotton. On the other hand, it may be posible for Japan hereafter to draw its supplies of cotton increasingly from other sources. This may happen normally, but the danger is specially great whenever there is a break in the price relation between Indian and other cotton in the direction of a lowering

of the latter. Such a break has apparently occurred at least twice during the past six years. Does the Indian cultivator normally realise a lower nett price for cotton exported than for cotton sold in India? If so, even if a reduced demand for cotton in India were followed by an increased demand from Japan, the nett earning of the *ryot* would be diminished. As regards the cultivation of long staple cotton, it is economically advantageous to the *ryot* to increase the area under improved varieties so as to meet the demand of Indian mills in respect of finer yarn. Nevertheless a stage may be reached when it may prove of doubtful advantage to the Indian cultivator to replace short by long staple cotton. Climatic conditions in most parts of the country favour the growth of short rather than long staple cotton. The former being to a large extent a monopoly of the Indian cultivator would probably give him in the long run a more dependable market.

12. To what extent is the raw cotton now imported into India of the same quality as Indian long staple cotton? Do you consider that the present import duty on raw cotton materially helps the Indian cultivator?

APPENDIX XXX.

SUBJECT 62.—*(a) Cotton Contracts Bill—Reference from Bombay Government.*

A Bill to provide for the better regulation and control of transactions in cotton in Bombay.

Whereas it is expedient to provide for the better regulation and control of transactions in cotton; it is hereby enacted as follows:—

Short title. 1. This Act may be called the Bombay Cotton Contracts Act, 193 .

Extent and operation. 2. (1) This Act shall apply to the City of Bombay and the Island of Salsette.

(2) It shall come into operation on such date as the Governor in Council may, by notification in the *Bombay Government Gazette*, direct.

Definitions. 3. In this Act, unless there is anything repugnant in the subject or context,

(*a*) "Bombay" means the City of Bombay and the Island of Salsette;

(*b*) "Board of Control" means a board appointed for the time being by the Governor in Council as provided in section 9;

(*c*) "Board of Directors" means a board of directors of a recognised cotton association constituted under section 5 and acting through at least a quorum of their members at a meeting of that board duly called and constituted;

(*d*) "Certified godown" means a godown maintained by a cotton association for storing cotton certified under the by-laws of the association;

(*e*) "Contract" means a transaction in cotton entered into or to be carried out in whole or in part in Bombay except such as the Governor in Council may, by notification in the *Bombay Government Gazette*, declare to be excluded from the provisions of this Act;

(*f*) "Cotton Association" means any association, organisation or a body of individuals, whether incorporated or not, established or formed for the purpose of regulating and controlling business in the sale, purchase or other transactions in cotton;

(*g*) "Forward contract" means a contract for the delivery of cotton at some future date;

(*h*) "Option in cotton" means a contract entered into or to be carried out in whole or in part in Bombay for the purchase or sale of a right to buy, or a right to sell, or a right to buy or sell cotton in future, and includes a *teji*, a *mandi* or a *teji-mandi* in cotton;

(*i*) "Ready contract" means a contract made or to be carried out in Bombay in which immediate delivery is contemplated;

(*j*) "Recognised cotton association" means a cotton association which is for the time being recognised by the Governor in Council, as provided in section 4.

4. (1) A cotton association desirous of being recognised for the purposes of this Act shall make an application in writing to the Governor in Council for such recognition, and shall submit by-laws for the regulation and control of transactions in cotton and furnish such information in regard to such recognition as the Governor in Council may from time to time require.

Recognition.

(2) The Governor in Council may give or refuse such recognition;

Provided that no such recognition shall be given unless the by-laws submitted by the cotton association under sub-section (*1*) shall have been published in the *Bombay Government Gazette* at least one month before the date of such recognition.

(3) The Governor in Council may at any time withdraw the recognition given to a cotton association under sub-section (*2*), and such cotton association shall thereupon cease to be a recognised cotton association.

(4) It is hereby declared that the East India Cotton Association, Limited, is a recognised cotton association for the purposes and subject to the provisions of this Act and the Articles and by-laws of the said Association shall be deemed to be by-laws made and published under the provisions of this Act.

5. (1) Subject to the provisions of section 9, in every recognised cotton association there shall be a Board of Directors. Subject to the sanction of the Governor in Council, a recognised cotton association may make and may from time to time add to, vary or rescind by-laws providing for—

Recognised association to have Board of Directors: power to make by-laws.

(*a*) the constitution of the Board of Directors,

(*b*) the powers and duties of the Board of Directors and the manner in which its business shall be conducted,

(*c*) the number and constitution of electoral panels and the representation upon such panels, and

(*d*) the method of appointment of members to the Board of Directors.

(2) By-laws made, added to, varied or rescinded under sub-section (*1*) shall be laid upon the table of the Bombay Legislative Council at the session of the said Council next following.

6. (1) The Board of Directors may, subject to the sanction of the Governor in Council, make and, from time to time add to, vary or rescind by-laws for the regulation and control of transactions in cotton.

Power of Board of Directors to make by-laws.

(2) In particular and without prejudice to the generality of the foregoing provision, such by-laws may provide for—

(*a*) the admission of various classes of members of a recognised cotton association and the exclusion, suspension, expulsion and re-admission of such members;

(*b*) a clearing house for the periodical settlement of contracts or differences thereunder and for the passing on of delivery orders and for any purpose in connection with options in cotton, and the regulation and maintenance of such clearing house;

(*c*) the number and classes of contracts in respect of which settlements shall be made or differences paid through the clearing house;

(*d*) fixing, altering or postponing settling days;

(*e*) determining and declaring the market rates for cotton of any and every description;

(*f*) the terms, conditions and incidents of contracts and the forms of such contracts as are in writing;

(*g*) regulating the making, performance and cancellation of contracts, including contracts between a commission agent and his constituent, or between a broker and his constituent, or between a jethawala or muccadum and his constituent, or between a member and a non-member of a recognised cotton association, and the consequences of insolvency on the part of a seller or buyer or intermediary, the consequences of a breach or omission by a seller or buyer and the responsibility of commission agents, muccadums and brokers not parties to such contracts;

(*h*) the prohibition of specified classes or types of dealings in cotton by a member of a recognised cotton association;

(*i*) the settlement of claims and disputes by arbitration and appeals against awards;

(*j*) the levy and recovery of subscriptions, fees, fines and penalties;

(*k*) disciplinary measures against members of a recognised cotton association, including suspension, expulsion, fines and non-monetary penalties, for breach of any by-law made by the Board of Directors;

(*l*) regulating the course of business between parties to contracts in any capacity;

(*m*) the institution, maintenance and control of certified godowns; and

(*n*) regulating the making, performance and cancellation of options in cotton.

(3) If any person committing a breach of any by-law made by the Board of Directors is a company, every Director and officer of such company shall also be deemed to have committed such breach, unless he proves that the breach was committed without his knowledge and control.

Publication of by-laws.

7. By-laws made under section 5 or 6 shall be subject to the condition of previous publication and, when sanctioned by the Governor in Council, shall be published in the *Bombay Government Gazette*.

Void contracts.

8. (1) Save as hereinafter provided in this Act, any contract (whether either party thereto is a member of a recognised cotton association or not) which is entered into after the date on which this Act comes into operation and which is not in accordance with the by-laws of any recognised cotton association, shall be void.

(2) No claim shall be allowed in any court for the recovery of any commission, brokerage, fee or reward in respect of any such contract.

Supersession of Board of Directors and appointment of Board of Control, its powers and duties.

9. (1) When the Governor in Council is of the opinion that it is necessary, in order to secure free trading in the market and to prevent obstruction thereto and interference therewith, to supersede any Board of Directors, the Governor in Council may, by notification in the *Bombay Government Gazette*, declare such Board to be superseded and may appoint in the place of such Board such persons as he thinks fit to constitute a Board of Control and may appoint one of their number to be Chairman.

(2) When the Governor in Council has appointed a Board of Control under the provisions of sub-section (*1*), the members of the Board of Directors which has been superseded shall, from the date of the notification, vacate their office as such members.

(3) The Board of Control appointed under sub-section (*1*) shall hold office for such period as the Governor in Council may, by notification in the *Bombay Government Gazette*, appoint.

(4) When a Board of Control has been appointed under sub-section (*1*), the Governor in Council may make by-laws to be published in the *Bombay Government Gazette* prescribing the powers and duties of a Board of Control and the manner in which its business shall be conducted.

(5) The Board of Control appointed under sub-section (*1*) may, subject to the provisions of sub-section (*4*), exercise all or any of the powers vested in or exercisable by the Board of Directors which it superseded.

(6) Notwithstanding anything contained in the by-laws of the recognised cotton association, a Board of Control may, subject to the previous sanction of the Governor in Council, rescind, add to or vary the by-laws of the said association and may, subject to a like sanction, make all or any such by-laws as may be made by the Board of Directors under the provisions of section 6 and which, in the opinion of the Board of Control, may be necessary for carrying out the purposes of this Act: and all or any such by-laws shall be deemed by-laws of the recognised cotton association.

(7) When a Board of Control has been appointed under sub-section (1) all such property of the recognised cotton association as such Board may by order in writing declare to be necessary for carrying out the purposes of this Act shall vest in such Board.

(8) On the determination of the period of office of the Board of Control appointed under sub-section (1), the recognised cotton association shall constitute a Board of Directors in accordance with the by-laws of the association and the property vested in the Board of Control or which such Board may have acquired shall revest or vest as the case may be in the recognised cotton association.

Prohibition of certain contracts after the appointment of the Board of Control.

10. (1) When a Board of Control has been appointed under section 9, the Governor in Council may, by notification published in the *Bombay Government Gazette*, declare that after the date appointed in the said notification, any forward or ready contract entered into except by or through the agency of a member of a recognised cotton association shall be void.

(2) No court shall entertain any suit or proceeding relating to any contract declared to be void under the provisions of sub-section (1) and no claim shall be allowed in any court for the recovery of any commission, brokerage, fee or reward in respect of any such contract.

(3) Any person entering into such contract shall, on conviction, be liable to a fine not exceeding Rs. 1,000 for such offence.

Bar of suits and proceedings against officers, etc.

11. No suit, prosecution or other legal proceedings whatsoever shall be entertained in any court against any officer or servant of a recognised cotton association or Board of Control for anything in good faith done or intended to be done in pursuance or execution of this Act or by-laws made thereunder.

12. (1) Contracts entered into under the provisions of the Bombay Cotton Contracts Act, 1922, shall be deemed to be valid, except in so far as they may be inconsistent with any of the provisions of this Act and by-laws made thereunder. Bom. XIV of 1922.

Savings.

(2) Forward contracts entered into before the date when this Act comes into operation and which are otherwise valid shall not be deemed to be invalid merely because they contravene the provisions of section 8.

APPENDIX XXXI.

SUBJECT 64.—*Publicity and Propaganda-Scheme prepared by Publicity Officer.*

Secretary's Note.

The attached memorandum was considered by the Agricultural Research Sub-Committee at its 23rd meeting held on the 31st July 1932. The suggestions put forward by the Publicity Officer were discussed at some length and it was decided that items 1, 3, 4, 5 and 7 of the summary given on page 121 of the memorandum should be given effect to, for the present.

An Upper Division Clerk, a Stenographer and a peon were sanctioned.

The proposal that the Publicity Officer should have the power to operate the relevant budget was approved of. It was also suggested that the Secretary might be conferred with whenever the Publicity Officer thinks it advisable to do so.

The Publicity Officer was instructed to prepare a budget for his requirements during the current year and this is as follows:—

		Rs.	Rs.
1.	*Pay of Officer*—		
	Publicity and Propaganda Officer at Rs. 850 per mensem from 1st June 1932 to 28th February 1933 ..	7,650	
	Provident Fund ..	638	
			8,288
2.	*Pay of Establishment*—		
	Stenographer at Rs. 80 per mensem (80—4—100) from 1st August 1932 to 28th February 1933 ..	560	
	Upper Division Clerk at Rs. 110 (110—5—150) from 1st August 1932 to 28th February 1933 ..	770	
	Peon at Rs. 25 from 6th July 1932 to 28th February 1933 [25—1 (biennial)—30] ..	196	
	Provident Fund ..	28	
			1,554
3.	*Travelling Allowance* ..		2,500
4.	*Contingencies*—		
	Printing	3,000	
	Translators	1,000	
	Postage and Telegrams ..	350	
	Furniture	300	
	Typewriter	325	
	Telephone	115	
	Stationery	250	
	Exhibits and cost of transport accommodation, etc.	818	
	Miscellaneous ..	500	
			6,658
	Total ..		19,000

LIBRARY OF THE ROYAL ASIATIC SOCIETY BOMBAY BRANCH

Memorandum on Indian Central Cotton Committee Publicity Methods by R. D. Mihra, M.A., B.Litt. (Oxon), Post-Graduate Dip. Higher Scientific Agriculture, University of Oxford.

It was made clear by the report of the Local Sub-Committee on the replies received from Provincial Directors of Agriculture on Publicity and Propaganda and the discussion which took place thereon at the meeting of the Committee in December last that the work of the Indian Central Cotton Committee suffers gravely from lack of propaganda. The replies to the Committee's pamphlet on "Cotton Improvement in India" showed. as the Sub-Committee's report stated, that the Committee's work is neither known nor appreciated and this is entirely due to the fact that no systematic publicity has been carried out. As an example of the need for publicity to bring the Committee's work before every section of the public interested in the production of Indian cotton and its improvement may be mentioned the remark of Mr. S. D. Saklatvala that "even educated people in his own constituency, viz., the Bombay Millowners' Association, were ignorant about the Committee's doings".

2. It is axiomatic that the work of a body like the Indian Central Cotton Committee needs publicity as an essential aid to its success and the report of the Local Sub-Committee and the opinions expressed by members of the Committee suggest that the kind of comprehensive propaganda that is required can only be adequately undertaken and carried out if a scheme of an all embracing character is laid down, which the Officer in charge of publicity may put in execution step by step. It is not to be supposed that all the suggestions which are sketched out in the scheme outlined below can be taken in hand or be effective at once. Some of them will take time to work up and others can only become effective as the means on which they depend—such as Radio and Aeroplane distribution—become more developed in this country. But there is much that can be done at once and if an immediate start is made a considerable effect could be produced in a few months and a transformation achieved respecting the present lack of knowledge and interest in the work of the Committee.

3. *People to be reached.*—In his reply to the Local Sub-Committee's letter, the Director of Agriculture, Bombay Presidency, said there seem to be two audiences :—

(*a*) The general public, and

(*b*) The cotton growers (mostly peasants).

4. The classification of audiences, however, requires to be more precise. The cotton growers should be placed first, as it is they to whom the work of the Committee should primarily make an appeal. Next are the middlemen, merchants and brokers, who buy and sell the cotton. Third the consumers, who are divided into two classes both requiring to be cultivated by propaganda :—

(*i*) The manufacturers, millowners and hand spinners and weavers and (*ii*) the people who purchase and use the manufactured cloth. Then there are the exporter and the foreign market—for which he caters, and finally the public at large. All these categories of classes and persons must become the object of vigilant attention of and constant nursing by the Publicity Office of the Committee if Indian cotton is to develop to the fullest extent and achieve and hold the position which it deserves to have with the consuming public both in India and abroad. Indian cotton, which at one time had a bad reputation, is now regarded with respect and its consumption has not only made strides in India but it has made headway in foreign countries like Japan, Britain and the Continent of Europe. It is obvious, therefore, that propaganda in foreign countries must be regarded as an important branch of the publicity work that is to be carried on.

5. *The general public.*—As regards the general public who may, for convenience, be taken first, it is obvious that the reports, pamphlets and bulletins of the Committee do not reach the public at large and from this point of view are ineffective. For this purpose the Press, which is the most important channel by which the general public can be reached, requires to be carefully nursed. There should be a constant stream of matter likely to catch the attention of editors as attractive matter for their readers in the form of brief notes and items of news, occasional articles of the magazine class, with and without illustrations and readable summaries of all the reports, pamphlets, etc., at present issued by the Committee. These will have to be supplied in all vernaculars. An intelligent cultivation of periodicals with matter of this kind is likely to produce very fruitful results. Editors, in India, especially are quick to appreciate the benefits to them of a Publicity Bureau which keeps up a constant supply of the readable matter and the ultimate effect produced on the public mind is impressive and incalculable.

6. The Press, indeed, must be regarded as the chief instrument for the publicity work of the Committee and in the early stages it will be practically the only one. It should be seconded next by a poster campaign, driving effective slogans into the minds of the public and initiating a "Use Indian Cotton" campaign of a country-wide character which might be reinforced by "Indian Cotton Weeks", wherever local enthusiasts can be found to help in the work of organisation. There are many other ways of reaching the public, such as "Use Indian Cotton" stamps and letter heads and post cards, and the Radio, the cinematograph and the aeroplane should all ultimately be brought into play for popularising Indian cotton. But some of these are, perhaps, too ambitious in their nature to be considered at the start. Others are described below. The essential thing at the first is to capture the press and to make it the chief instrument of the Committee's publicity. When that has been effectively done, other forms of bringing the virtues of Indian cotton to the attention of the general public may be considered.

7. In time it should be feasible to bring out a quarterly or a monthly journal under the Committee's auspices which should be circulated free to all newspapers and other important periodicals as well as to libraries, reading rooms and all bodies and associations, directly or indirectly connected with the Cotton Industry in India and abroad.

8. *Pamphlets.*—A series of illustrated pamphlets on the following subjects may be prepared for the dissemination of knowledge of cotton from sowing to marketing stage :—

(1) The cotton plant,
(2) Cultivation of cotton,
(3) Culture and treatment of cotton plant,
(4) Diseases and pests of the cotton plant,
(5) Picking of cotton,
(6) Technology of cotton,
(7) Uses of cotton and cotton seed,
(8) Cotton as a world force, and
(9) A decade of work on cotton in India.

9. *Bulletins.*—Attractive pamphlets, running over 8 or 10 pages, written in simple and concise language, and giving a summary of the various schemes financed by the Indian Central Cotton Committee and the results achieved should be issued periodically. These pamphlets would be illustrated and would serve a very useful purpose in acquainting the bulk of the people with improved methods of cotton growing.

10. *Leaflets.*—A leaflet, printed in a folder form and setting out the organization, aims and the functions of the Committee and containing a brief summary of the important improvements made in cotton growing, would be useful. This would be printed in all important vernaculars of the country and distributed widely.

11. *Posters.*—Simple but striking designs showing the main activities in the improvement of cotton could be prepared with the help of an expert designer. They can be displayed at exhibitions, fairs, village chowkies, at railway stations, in courts and other places and wherever cultivators usually assemble. For instance, a poster illustrating a comparison between a clean and an unsatisfactory manner of picking cotton might be prepared. Another poster could show a single model plant of an improved variety of cotton such as "Jayawant" wherein characters of branching, bearing habits, etc., are brought out prominently. A third one could drive home the importance of ginning percentage through combing seed or by way of a contrast in two heaps of cotton.

12. *Films.*—A cinematograph film showing works at Matunga, Indore, Lyallpur, the Entomological Scheme of the United Provinces, the fumigation of American cotton may be prepared and these films should be shown at important centres throughout the cotton growing tracts. They may also be shown to members of the Council of State, Legislative Assembly and Councils, Rural Councils, sundry Agricultural Associations, Chambers of Trade and Commerce, and other public bodies interested in cotton directly and indirectly, such as Revenue and Irrigation Departments and Co-operative Societies. Preparation of slides on improved methods of the cultivation, marketing, etc., of cotton could also be undertaken.

13. *The Cotton Grower.*—Turning to special and individual classes, the cotton grower must of course claim the first attention. Below are outlined some of the forms which have been found most useful in other countries in educating the grower in improved methods and helping him to market his produce to the best advantage. All these methods can be profitably applied in this country and could produce, if energetically and intelligently carried out, an effective improvement in the farmer's mentality and methods within a comparatively brief period.

14. *Exhibits.*—Exhibits are essential factors in disseminating information. They have had much to do with the advancement of agriculture and its business in the leading agricultural countries of Europe which I visited. People generally grasp readily the significance of what they see. In practically all the country wide, regional, district or community fairs, agriculture and the industries dependent upon it have occupied a prominent place. Exhibits afford the observer opportunities to comprehend quickly progress in agricultural science and practice and enable him to apply this new knowledge to the solution of his own problems.

15. The value of exhibits as a teaching method cannot be over-estimated and has long been recognised. Side by side with exhibits of the Indian Central Cotton Committee, consisting of specimens of products, models or panels presenting photographs and statements the object of display should be to show what the Committee is doing and what it can do to help the grower. Exhibits must answer questions affirmatively: will it give the visitor the information likely to make his farming more profitable? The Indian Central Cotton Committee, for instance, need not always emphasise the long staple cotton as the only goal to be achieved but the growing of cotton that will bring to the grower the greatest return. The exhibit must tell its own story quickly, strikingly and convincingly, so as to arrest, hold and impress the attention of the observer. The Publicity Department of the Indian Central Cotton Committee should be ever on the alert to find newer and better methods of presenting information about cotton growing, marketing and manufacture.

16. Exhibits need not give complete details of a principle, but must arouse interest so that the observer will seek the further information required to put the illustrated principle into practice. Exhibits of course should be supplemented by the Publicity Department's publications which may be distributed widely. Railway stations are excellent venues for the display of exhibits.

17. *Demonstration Van.*—A demonstration van, containing samples of the improved varieties of cotton, and other exhibits of special interest, films, slides, loud speaker and wireless, etc., might be considered. The function of the Van would be to serve as a nucleus, and at every centre in the cotton growing tract a fair would have to be arranged for. The Van would visit all the cotton growing tracts and prove a remarkably effective agency for the dissemination of knowledge. The experiment made by the Punjab Government in co-operation with the North Western Railway in running the Demonstration Train was a conspicuous success. As a part of the Adult Education Movement, the Demonstration Train had probably exercised a far more profound influence upon the lives of the peasantry and of the dwellers in the small towns in the Punjab districts than any other agency hitherto established. Combining all the attractions of a '*tamasha*', a novelty and an economic opportunity, it could not fail to attract thousands of people of all classes, farmers, landless artisans and cultivators, labourers, weavers, dyers, carters, school children, peasants' wives and coolies' daughters, and evoke general interest and enthusiasm. It must be admitted that the varied character of exhibits can be safely calculated to make a permanent impression upon every mind, and that each grown-up visitor would leave with recollections which cannot possibly fade away altogether from his mind: the farmer would never forget agricultural items which would capture his special fancy, once convinced of the value of better methods, better implements and a better choice of crops and seeds, he will readily abandon his old primitive ways as has been exemplified by the manner in which millions of acres in the Punjab have come under more advanced cultivation. The weaver would always recall yarn knots prepared from the improved and the local varieties of cotton, as also the breaking tension of these yarns shown in bold types in the vernaculars of the areas concerned. Demonstration Van would open the eyes of the people to the existence of improved appliances and more scientific ideals concerning cultivation and industry and would bring them at least slightly in touch with a world of thought and production into which they can rarely obtain an insight.

18. *Tournaments.*—The possibility of inaugurating, in co-operation with Provincial Agricultural Departments, a series of cotton growing tournaments in the districts with improved variety of cotton and awarding prizes to successful candidates might also be considered.

19. *Co-operative Farming and Marketing.*—Co-operative efforts should take a strong economic turn in the history of agriculture in India. In different areas farming should be re-organised so as to place equal emphasis on effective individual practice and on wise group action tending to regulate production and the movement of cotton into consuming channels. These will have a constructive influence in changing farm practices and competitive business methods. Vigorous efforts should be made to acquaint farmers with the object, relation and business possibilities of co-operative associations.

This combined with a knowledge of the needs of particular localities should enable the farmer to look ahead and adjust production to market requirements. Technical and economic facts should be presented at hundreds of meetings. Market conditions should be analysed in an effort to foresee the probable effects of overproduction or failure to produce enough as the case may be.

20. *Market News Service.*—This of course would be applicable only where the growers, or some of them, are literate. It will be necessary in the first instance to educate growers in India to appreciate the importance of studying market reports. But there is no reason why this should not be done in course of time preferably through co-operative marketing societies the establishment and encouragement of which, it is to be hoped, will be extended, and in other ways.

21. Increasing demand for authoritative cotton market news, reports and adapting the market information to readers in the various producing areas and to the requirements of the grower is a necessity long-felt in India. In most countries there are two classes of cotton market news readers : producers and dealers who wish to follow reports promptly and closely, who may keep in touch with the market through the press, and producers who are not operating in the market throughout the season and whose needs are met by the weekly, monthly, quarterly or seasonal review. The first class of readers want original facts and figures on conditions, grades, shipment and prices and must depend upon the prompt and accurate work of market reporters and upon quick distribution. The second class of readers who rely on the study of these reports as checked, compared, summarised and reviewed by the publicity specialists. Until the time for issuing these from the Committee's office is ripe, cotton journals and trade periodicals will be treated as far as possible according to the demand.

22. A recent development in the market news is the combined summary of market features for all of the leading farm products, stated in one or two paragraphs for each class of products. This type of market news has been found suitable for the agricultural trade and commercial journals and for a number of news agencies and large newspapers. Short general review of cotton as indicative of the general market situation and its bearing on future developments may be useful. Extensive use of the existing news agencies will be made in this connection which will prove effective.

23. *Middlemen and Consumers.*—These classes will be treated on the same lines as the growers, according to the requirements of each. They would be continually supplied with informational matter regarding the quality of Indian cotton, the character of the crop, improvements from time to time, all market movements and every kind of information which is likely to give Indian cotton a pull over foreign cotton in their calculations and operations. They will also be reached, of course, by the publicity intended for the general public.

Summary.

To summarise : It is recognized that publicity and propaganda are urgently needed for the maintenance and extension of the Committee's work. Such propaganda must reach the cotton growers and all those interested at any stage, from the time the cotton leaves the field until it reaches the consumer in the form of manufactured cloth, as well as its exporters and the foreign market. (*Paragraph* 5.)

The following are the proposed initial steps in our campaign of publicity :—

(1) *The Press.*—Both English and Vernacular papers to be sedulously nursed. A constant flow of material to the Press to be kept up and Editors cultivated so that the columns of newspapers will be open for its reception. (*Paragraph* 6.)

(2) A quarterly or monthly journal to be published under its auspices. (*Paragraph* 7.)

(3) Illustrated pamphlets for the dissemination of knowledge of cotton and bulletins describing summary schemes of the Committee to be issued periodically. (*Paragraphs* 8 *and* 9.)

(4) Leaflets, posters and exhibits also to be utilised to the utmost extent for propagating the Committee's schemes and the qualities of Indian cotton. (*Paragraphs* 10, 11, 14, 15 *and* 16.)

(5) Exhibits to be displayed at agricultural shows, *melas*, railway stations and other suitable places wherever opportunity offers. (*Paragraphs* 15 *and* 16.)

(6) Demonstration motor van with loud speakers, wireless, films, etc., to be considered and got into operation as soon as feasible. (*Paragraphs* 12 *and* 17.)

(7) Cotton Tournaments in the districts with improved variety to be organised in co-operation with Provincial Agricultural Departments. (*Paragraph* 18.)

(8) Co-operative farming and marketing to be sedulously encouraged and stimulated. (*Paragraph* 19.)

(9) Establishment of a market news service. (*Paragraphs* 20, 21 *and* 22.)

(10) In all other ways middlemen, consumers and the public generally to be supplied with every kind of informational matter concerning Indian cotton and the home and foreign markets. (*Paragraph* 23.)

N.B.—In order to be able to operate the scheme fully and effectively I would require at the start a stenographer and an upper division clerk with knowledge of general office routine.

I suggest that I should also have the authority to operate the finances which are set apart for "publicity and propaganda", as in the case of other departmental heads. The man in charge of publicity and propaganda is the only one who can properly understand the necessity for payments as they arise. He should, therefore, have complete freedom within the scheduled limits laid down by the Committee, to allocate funds and payments in the directions and to the extent that he thinks desirable and most productive of results.

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Abstract Proceedings

of the

Twenty-sixth Meeting of the Indian Central Cotton Committee, Bombay,

held on the

2nd and 3rd February 1933

BOMBAY BRANCH
OF THE
ROYAL ASIATIC SOCIETY
TOWN HALL, BOMBAY.

Indian Central Cotton Committee.

With the Secretary's Compliments.

Vulcan House, Nicol Road,
Ballard Estate,
Fort, Bombay.

INDIAN CENTRAL COTTON COMMITTEE.

26TH MEETING—2ND AND 3RD FEBRUARY 1933.

(Held in the Assembly Hall of the Karachi Chamber of Commerce, Wood Street, Karachi.)

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Present:

Dewan Bahadur Sir T. Vijayaraghavacharya, K.B.E. (*President*), Vice-Chairman, Imperial Council of Agricultural Research,

Sir Joseph A. Kay, Kt. (*Vice-President*), Representative of the Bombay Chamber of Commerce,

B. C. Burt, Esq., C.I.E., M.B.E., I.A.S., Agricultural Expert, Imperial Council of Agricultural Research, *ex-officio*,

S. V. Ramamurty, Esq., I.C.S., Director of Agriculture, Representative of the Agricultural Department, Madras,

Dr. W. Burns, I.A.S., Director of Agriculture, Representative of the Agricultural Department, Bombay Presidency,

P. B. Richards, Esq., I.A.S., Entomologist to Government, Representative of the Agricultural Department, United Provinces,

H. R. Stewart, Esq., I.A.S., Director of Agriculture, Representative of the Agricultural Department, Punjab,

Chunilal B. Mehta, Esq., Representative of the Indian Merchants' Chamber, Bombay,

J. Vonesch, Esq., Representative of the Tuticorin Chamber of Commerce,

W. Roberts, Esq., Representative of the Empire Cotton Growing Corporation,

Y. G. Deshpande, Esq., Commercial Representative, Central Provinces,

Rao Bahadur G. R. Kothare, M.L.C., Commercial Representative, Central Provinces,

Khan Bahadur Sardar Habibullah, M.L.C., Commercial Representative, Punjab,

Sardar Sampuran Singh, M.L.C., Co-operative Banking Representative,

M. R. Ry. K. Sarabha Reddi Garu, M.L.C., Representative of cotton growers, Madras,

Sardar Rao Bahadur Bhimbhai Ranchodji Naik, M.L.C., Representative of cotton growers, Bombay Presidency,

Rao Bahadur C. S. Shirahatti, Representative of cotton growers, Bombay Presidency,

Khan Bahadur Maulvi Mohammad Obaidur Rahman Khan, M.L.C., Representative of cotton growers, United Provinces,

Rao Bahadur Rao Bikram Sinha, M.L.C., Representative of cotton growers, United Provinces,

Mian Nurullah, M.L.C., Representative of cotton growers, Punjab,

Rao Bahadur M. G. Deshpande, Representative of cotton growers, Central Provinces and Berar,

M. P. Kolhe, Esq., M.L.C., Representative of cotton growers, Central Provinces and Berar,

C. V. Sane, Esq., Director of Agriculture, Representative of the Baroda State,

Mr. F. K. Jackson, Director, Institute of Plant Industry, Indore, Representative of Rajputana and Central India States,

W. J. Jenkins, Esq., I.A.S., Chief Agricultural Officer in Sind, Karachi,

Girdharlal B. Kotak, Esq., Representative of the Karachi Indian Merchants' Association,

Rai Saheb Thakur Ram Prasad Singh, Assistant Economic Botanist to Government, United Provinces, Cawnpore,

Ghulam Mohammad Khan, Esq., Representative of cotton growers, Sind,

The Secretary (P. H. Rama Reddi, Esq., I.A.S.),

The Director, Technological Laboratory, Matunga (Dr. Nazir Ahmad),

The Publicity Officer (R. D. Mihra, Esq.).

By invitation.

Rai Saheb Kalidas Sawhney, Cotton Research Botanist, Parbhani, Hyderabad State,

H. Dow, Esq., C.I.E., I.C.S.;
Mukhi Gobindram Pritamdas,
Rai Bahadur Tharumal Bilaram,
D. M. Bakshi, Esq.,
} Members of the Sind Cotton Committee,

Lala Niranjan Prasad (*Chairman*),
A. P. Darlow, Esq. (*Vice-Chairman*),
Seth Chellaram Shewaram,
Geo Gut, Esq.,
Seth Issardas Varandmal,
Seth Nechaldas Chhangomal,
Lala Ruplal Shankardas,
C. Voegeli, Esq.,
T. B. Dalal, Esq. (Secretary),
} Representatives of the Karachi Joint Cotton Committee,

T. M. Gurbaxni, Esq., Secretary, Karachi Indian Merchants' Association, and

L. S. Carbonell, Esq., Representative of the Karachi Chamber of Commerce.

Letters and telegrams were received from the following members regretting their inability to attend the meeting :—

F. J. Plymen, Esq., C.I.E., I.A.S., Director of Agriculture, Representative of the Agricultural Department, Central Provinces,

F. D. Odell, Esq., I.A.S., Deputy Director of Agriculture, Representative of the Agricultural Department, Burma,

The Director-General of Commercial Intelligence and Statistics, Calcutta (*ex-officio*),

Sir Purshotamdas Thakurdas, Kt., C.I.E., M.B.E., Representative of the East India Cotton Association, Ltd., Bombay,

S. D. Saklatvala, Esq., Representative of the Bombay Millowners' Association,

J. O. G. Barnes, Esq., Representative of the Karachi Chamber of Commerce,

Seth Naranlal Jivanlal, Representative of the Ahmedabad Millowners' Association,

J. Tinker, Esq., Representative of the Upper India Chamber of Commerce, Cawnpore,

Robert Lee, Esq., Commercial Representative, Madras,

Nalini Ranjan Sarkar, Esq., Commercial Representative, Bengal,

The Honourable Mr. V. C. Vellingiri Gounder, Representative of cotton growers, Madras,

B. A. Collins, Esq., C.I.E., I.C.S., Director-General and Secretary to Government, Department of Commerce and Industry, Representative of the Hyderabad State,

H. H. Pandya, Esq., Agricultural Adviser to Government, Representative of the Gwalior State,

D. N. Mahta, Esq., Economic Botanist to Government, Central Provinces, Nagpur,

Dr. L. C. Coleman, C.I.E., Director of Agriculture, Representative of the Mysore State,

M. R. Ry. V. Ramanatha Ayyar, Avl., Cotton Specialist, Coimbatore,

Lala Shri Ram, Representative of Cotton Millowners' of Delhi.

President's Speech.

Ladies and Gentlemen,

It gives me great pleasure to welcome you to the 26th meeting of the Indian Central Cotton Committee. At the request of the Sind Cotton Committee, you decided at the last meeting to change the venue of the meeting from Bombay to Karachi and this meeting is the second of its kind which has been held outside Bombay.

In the first place, I should like, on your behalf, to extend a warm welcome to the members of the Karachi Joint Cotton Committee and the Sind Cotton Committee and to the gentlemen and ladies who have accepted our invitation to attend this meeting.

I desire to offer our congratulations to Rao Bahadur Bhimbhai Ranchodji Naik and Rao Saheb C. S. Shirahatti who have since been honoured with the title of Sardar and Rao Bahadur respectively and also to Mr. V. C. Vellingiri Gounder on his election as a member of the Council of State.

There have been a few changes in the personnel of the Committee since we last met. Mr. H. R. Stewart has taken the place of Mr. D. Milne as Director of Agriculture, Punjab, and we are glad to see him in our midst again. We shall miss Mr. Milne keenly. There is no need for me to tell this meeting of the pride he took in the Punjab and of the contribution made by him to the economic welfare of the cultivators of the Province. Our best wishes accompany him in his retirement.

In my last opening address I mentioned that Mr. J. H. Ritchie, our Secretary, had gone on six months' leave and that Mr. Rama Reddi was officiating in his place. Mr. Ritchie has since gone back to his Province and Mr. Rama Reddi has been appointed your permanent Secretary. We shall wish Mr. Ritchie every success in the responsible office to which, it is understood, he will soon be called.

Meeting as we do in Sind I shall perhaps be held guiltless of exaggeration if I referred to the Indus Valley as the cradle of Indian civilisation and of cotton-growing and the birth-place of cotton manufacture. The recent discovery by the Archæological Department of cotton materials among the remains of the prehistoric civilisation at Mohenjo-Daro, and their identification at our Technological Laboratory as made of the fibre of Gossypium arboreum have proved that cotton was being grown on this soil some five thousand years ago, and most probably this wonderful " wool " of the vegetable lamb was the wonder and surprise of the civilisation of that time. Now, Gentlemen, upon you, who have been charged with the improvement of the growing of cotton in India, and upon the Agricultural Department of Sind under the able guidance of Mr. Jenkins, rests the task of again surprising the world with a new wonder. The vast irrigated areas of the Sukkur Barrage are there for you to produce it, and here is Karachi, an excellent port to send it all over the world.

Turning now to the agenda which has been placed before us at this meeting, many subjects of great interest and importance are to be found.

The Central Provinces Cotton Market Bill, which was introduced by Mr. M. P. Kolhe in the Central Provinces Legislative Council and which received your approval in principle, has since become law. Steps to issue rules under the Act are being taken by the Central Provinces Government, which has agreed to give you an opportunity of expressing your views before the draft rules are placed before the Legislative Council.

The Madras Cotton Control Act, which prohibits the growing of Pulichai cotton in certain areas of the Madras Presidency, has since received the assent of the Governor General. The Government of Madras have also issued notifications and Rules under this Act.

It will be remembered that this Committee at its last meeting discussed the Bombay Cotton Contracts Bill referred to it by the Bombay Government. The Bill has since been passed into law and a copy of the Act will be found among the papers before you.

An important subject on the Agenda is the economic investigation into the cost of production of crops in the principal cotton and sugarcane tracts of India. The Joint Sub-Committee of the Imperial Council of Agricultural Research and this Committee met in Simla in August last and again in Karachi in the past few days. The record of its deliberations and the recommendations made thereon are now before you. It is the first systematic attempt in India to conduct an enquiry into the cost of agricultural production and considerable public interest has been aroused in the proceedings. The scheme has received the blessing of the Imperial Council of Agricultural Research and now awaits your decision.

The draft memorandum on the compilation and publication of all-India Cotton Forecasts drawn up by your Local Sub-Committee is also for consideration. I particularly invite your attention to the proposed constitution of a Forecasts Sub-Committee.

There is also on the agenda a proposal for the formation of a cotton association in Karachi by Mr. Girdharlal B. Kotak, a member of this Committee. In July 1928, this Committee, while considering the position of cotton marketing in Karachi, earnestly hoped that the Karachi Joint Cotton Committee would develop at an early date into an association, similar to the East India Cotton Association. As we are now meeting in Karachi, I hope this subject will receive its due share of consideration at your hands.

Yet another important item on the agenda is the review of the past work and future policy of the Committee. We have had this subject before us since July 1931. At that meeting, we considered a note prepared by the Secretary on the research work then in progress, and a tentative programme for the next five years ; and at the meeting in December 1931, we further considered that note in the light of the valuable comments and criticisms received from Trade Associations and individuals, to whom the note had been sent for their views. We had then a full and interesting discussion on this subject, and, as you will remember, two

representatives of the Bombay cotton trade, whom we specially invited, took an active part in the discussion and helped us with their views. Now that we are in Karachi, which is second only to Bombay as an exporting centre of India and we have amongst us distinguished representatives of the Trade, members of the Karachi Joint Cotton Committee, and members of the Sind Cotton Committee, let us hope that they will likewise assist us with their advice on a subject vitally affecting the future growing, marketing and manufacture of Indian cotton.

At the meeting in December 1931, it was decided that the points generally agreed upon during the discussion should again be taken up for final consideration at this meeting. The Secretary's note now before you contains in a nutshell the main points then decided on. Your verdict on these points will form the basis of our future programme of work.

A point of importance in this connection, which has been brought to my notice, is that the difference in prices between short-staple and medium or long-staple cottons has, for various reasons, been narrower in recent years than it used to be. Whether the present level of prices represents the normal is a debatable point.

You will see from the Secretary's note that mills and exporters in India have been good enough to supply information regarding their demands for various types of Indian cotton. The information so received, though incomplete, still gives us a better idea than we had hitherto of the types which are in most demand by the mills in India, and which have an exportable surplus, and are exported.

In considering the future cotton policy of India, there is a new factor which deserves your attention. I refer to Article 8 of the Agreement made at the last Imperial Economic Conference held at Ottawa in 1932. Though there are at present many difficulties in the greater use of Indian cotton in the United Kingdom, I may venture to say that it seems to me that this Article contains in it the germs of great future possibilities both for India and for England if by their concerted efforts the difficulties could be surmounted. Your Local Sub-Committee, which recently considered the question of implementing Article 8 of the Ottawa Agreement, has now referred it to you, and it forms a separate item on the agenda.

Gentlemen, I shall not keep you any longer from the work before you. Before concluding my speech, I would like, on your behalf, to thank Mr. Jenkins for the trouble which he has taken in making arrangements for this meeting.

SUBJECT 2.—*Confirmation of Minutes.*

The Minutes of the 25th meeting were confirmed.

SUBJECT 3.—*Retirement of members by rotation.*

The Secretary's note* was recorded.

*Appendix I (page 45).

SUBJECT 4.—*Appointment* of Vice-President and Sub-Committees.*

The Vice-President moved the following resolution which was seconded by Sardar Rao Bahadur Bhimbhai R. Naik and carried unanimously :—

RESOLUTION 2.—"That Sir Purshotamdas Thakurdas be appointed Vice-President for the year 1933-34."

Standing Finance Sub-Committee.

The President moved :—

RESOLUTION 3.—"That the following members be appointed to form the Standing Finance Sub-Committee for the financial year 1933-34 :—

Sir Purshotamdas Thakurdas,
Dewan Bahadur Sir T. Vijayaraghavacharya (ex-officio),
Sir Joseph A. Kay,
Mr. S. D. Saklatvala,
Sardar Rao Bahadur Bhimbhai Ranchodji Naik,
Mr. J. Vonesch,
Rao Bahadur G. R. Kothare,
Mr. J. O. G. Barnes, and
Mr. Chunilal B. Mehta."

This was seconded by the *Vice-President* and carried unanimously.

Cotton Ginning and Pressing Factories Sub-Committee.

The President proposed :—

RESOLUTION 4.—"That the following members be appointed to form the Cotton Ginning and Pressing Factories Sub-Committee :—

The Vice-President (Sir Purshotamdas Thakurdas),
Sir Joseph A. Kay,
Mr. S. D. Saklatvala,
Mr. J. O. G. Barnes,
Mr. J. Vonesch,
Mr. Chunilal B. Mehta,
Mr. Robert Lee,
Mr. W. Roberts,
Mr. J. Tinker,
Mr. Y. G. Deshpande,
Sardar Sampuran Singh,
Co-opted member—Lala Shri Ram."

The Vice-President seconded the resolution which was carried unanimously.

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* Appendix II (page 45).

Local Sub-Committee.

The President moved :—

RESOLUTION 5.—"That the following members be appointed to compose the Local Sub-Committee :—

Sir Purshotamdas Thakurdas,
Dewan Bahadur Sir T. Vijayaraghavacharya,
Sir Joseph A. Kay,
Mr. S. D. Saklatvala,
Sardar Rao Bahadur Bhimbhai Ranchodji Naik,
Mr. J. Vonesch,
Mr. Girdharlal B. Kotak,
Mr. J. O. G. Barnes,
Mr. Chunilal B. Mehta, and
Mr. C. V. Sane."

This was seconded by *Mr. Burt* and carried unanimously.

Agricultural Research Sub-Committee.

The President moved :—

RESOLUTION 6.—"That the following members be appointed to form the Agricultural Research Sub-Committee :—

I. Ex-officio—Dewan Bahadur Sir T. Vijayaraghavacharya,
II. The Vice-President (Sir Purshotamdas Thakurdas),
III. The Director, Institute of Plant Industry, Indore—Mr. F. K. Jackson,
IV. Co-operative representative—Sardar Sampuran Singh,
V. Cotton growers' representative—Mr. W. Roberts,
VI. Cotton Trade representative—Sir Joseph A. Kay,
VII. Four Agricultural Officers—Mr. T. F. Main,
Mr. F. J. Plymen,
Mr. H. R. Stewart,
Mr. V. Ramanatha Ayyar,
VIII. Additional members—Mr. B. C. Burt,
Dr. L. C. Coleman,
Dr. W. Burns,
Mr. D. N. Mahta,
Rai Saheb Thakur Ram Prasad Singh,
Mr. H. H. Pandya,
Mr. W. J. Jenkins,
Mr. P. B. Richards,
Mr. B. A. Collins,
Mr. S. V. Ramamurty,
Mr. C. V. Sane,
Mr. Chunilal B. Mehta,
IX. Co-opted member—Cotton Research Botanist, Lyallpur, and
X. The Secretary."

This was seconded by the *Vice-President* and carried unanimously.

Technological Research Sub-Committee.

The President moved and the *Vice-President* seconded the following resolution which was carried unanimously :—

RESOLUTION 7.—"That the following members form the Technological Research Sub-Committee :—

The President (ex-officio),
The Vice-President (Sir Purshotamdas Thakurdas), ex-officio,
Sir Joseph A. Kay,
Mr. S. D. Saklatvala,
Mr. B. C. Burt,
Mr. H. R. Stewart,
Mr. T. F. Main,
Mr. Chunilal B. Mehta,
Mr. Y. G. Deshpande,
Seth Naranlal Jivanlal,
Mr. S. V. Ramamurty,
Lala Shri Ram,
Mr. J. Tinker,

The Bombay Millowners' Association, the Ahmedabad Millowners' Association and the East India Cotton Association will be asked to nominate two representatives each."

Research Students Selection Sub-Committee.

The President moved :—

RESOLUTION 8.—"That the Research Students Selection Sub-Committee be composed of the following members :—

The President,
The Vice-President (Sir Purshotamdas Thakurdas),
Sir Joseph A. Kay,
Mr. S. D. Saklatvala,
Mr. B. C. Burt,
Dr. W. Burns,
Mr. P. B. Richards,
Mr. H. R. Stewart,
Mr. F. J. Plymen,
Mr. S. V. Ramamurty,
Dr. L. C. Coleman,
Mr. H. H. Pandya,
Mr. T. F. Main,
Mr. W. J. Jenkins,
Mr. F. K. Jackson,
Mr. C. V. Sane, and
Dr. Nazir Ahmad."

This was seconded by the *Vice-President* and carried unanimously.

Malpractices Sub-Committee.

The President moved :—

RESOLUTION 9.—"That the Sub-Committee on Malpractices consist of the following members :—

The Vice-President (Sir Purshotamdas Thakurdas),
Sir Joseph A. Kay,
Mr. S. D. Saklatvala,
Mr. J. O. G. Barnes,
Mr. Chunilal B. Mehta,
Mr. T. F. Main,
Sardar Rao Bahadur Bhimbhai Ranchodji Naik,
Mr. J. Vonesch,
with power to co-opt."

This was seconded by the *Vice-President* and carried unanimously.

SUBJECT 5.—*Cotton Transport Act—Bombay—Inclusion of additional Railway Stations in the Nerbudda-Mahi Zone.*

The Secretary's note* was recorded.

SUBJECT 6.—*Cotton Transport Act—Madras.*

The Secretary's note was† recorded.

SUBJECT 7.—*Central Provinces Cotton Market Act.*‡

The following resolution proposed by the *President* and seconded by *Mr. Kolhe* was passed unanimously :—

RESOLUTION 10.—"The Indian Central Cotton Committee thanks the Government of the Central Provinces for agreeing to give the Committee an opportunity of expressing its views on the draft rules proposed to be framed under the Central Provinces Cotton Market Act before placing them before the local Council."

SUBJECT 8.—*Madras Cotton Control Act—Notifications and Rules.*

The Secretary's note§ was recorded.

SUBJECT 9.—*Bombay Cotton Contracts Act.*

The Secretary's note‖ was recorded.

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* Appendix III (page 48).
† Appendix IV (page 49).
‡ Appendix V (page 50).
§ Appendix VI (page 51).
‖ Appendix VII (page 52).

SUBJECT 10.—*Universal Standards‡ for Indian Cottons—Opinions received.*

Mr. Chunilal B. Mehta moved the following resolution which was seconded by *Sardar Rao Bahadur Bhimbhai R. Naik* and carried unanimously :—

RESOLUTION 11.—"That steps be taken to introduce Universal Standards for Indian cottons for use in India itself and the Local Sub-Committee be instructed to prepare a scheme for the purpose in conjunction with the various trade associations."

SUBJECT 11.—*Scheme† for an enquiry into the cost of production of crops in the principal cotton and sugarcane tracts of India—Replies from Members.*

After a long discussion the Committee decided unanimously that, as recommended by the Joint Sub-Committee of the Indian Central Cotton Committee and the Imperial Council of Agricultural Research, the entire cost of the scheme, finally estimated at Rs. 5,12,000, should be shared on 50 : 50 basis by the Indian Central Cotton Committee and the Imperial Council of Agricultural Research.

SUBJECT 12.—*Cotton Statistics—Draft Memorandum§ on the compilation and publication of All-India Cotton Forecasts by the Committee.*

Mr. Burt moved :—

RESOLUTION 12.—"That the Indian Central Cotton Committee appoints a Cotton Forecast Improvement Committee to meet as soon as possible after the publication of the Final Cotton Forecast* and to prepare a report on the degree of accuracy of the all-India Cotton Forecasts with recommendations for its improvement in future."

This was seconded by *Mr. Chunilal B. Mehta* and carried unanimously.

The President moved :—

RESOLUTION 13.—"That the personnel of the Forecast Improvement Committee as mentioned in the Secretary's Memorandum be approved."

This was seconded by *Mr. Burt* and carried unanimously.

Mr. Burt moved :—

RESOLUTION 14.—"That the Central Cotton Committee invites proposals from the Agricultural Departments of the cotton growing provinces and States for a study of the village consumption of cotton in India and these proposals be considered at the next meeting of the Committee."

This was seconded by *Mr. Sane* and carried unanimously.

‡ Appendix VIII (page 53). † Appendix IX (page 56).

§ Appendix X (page 59).

*At present called the Supplementary General Memorandum on the cotton crop and published in April.

Mr. Burt moved :—

RESOLUTION 15.—"That the Karachi Joint Cotton Committee be invited to consider the possibility of securing an annual census of cotton stocks as in Bombay, and a similar representation be made to trade bodies in Madras, Calcutta, Tuticorin and other important places."

This was seconded by *Mr. Vonesch* and carried unanimously.

SUBJECT 13.—*Cotton Statistics—Comparison of Cotton Press Returns with Cotton Forecasts.*

The Secretary's notes* were considered and recorded.

SUBJECT 14.—*Cotton Ginning and Pressing Factories Act—Progress made in Indian States.*

The Secretary's note† was recorded.

SUBJECT 15.—*Cotton Ginning and Pressing Factories Pools—Replies from Local Governments.*

The Secretary's note‡ was recorded.

SUBJECT 16.—*Summary of Proceedings of the Local Sub-Committee.*

The Secretary's note§ was recorded.

SUBJECT 17.—*Proposal‖ for the formation of a Cotton Association at Karachi.*

Mr. Kotak proposed the following resolution which was seconded by *Mr. Y. G. Deshpande* and passed unanimously :—

RESOLUTION 17.—"That the Indian Central Cotton Committee notes with satisfaction the strides that have been made with regard to the organisation of the cotton market in Karachi as is evident from the report of the Karachi Joint Cotton Committee for the period 1927-32. This Committee feels that the affairs of the Karachi Joint Cotton Committee have reached a stage at which its conversion into a separate Cotton Association seems very desirable."

SUBJECT 18.—*Appointment¶ of a permanent representative of the Karachi Indian Merchants' Association on the Committee—Proposed resolution by Mr. G. B. Kotak.*

Mr. Kotak moved and *Mr. Jenkins* seconded the following resolution which was carried unanimously :—

RESOLUTION 18.—"That the Indian Central Cotton Committee recommends to the Governor General in Council to bestow on the Karachi Indian Merchants' Association the right to send one permanent representative on this Committee instead of the present nominated additional member."

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* Appendix XI (page 63).
† Appendix XII (page 89).
‡ Appendix XIII (page 89).
§ Appendix XIV (page 89).
‖ Appendix XV (page 91).
¶ Appendix XVI (page 92).

SUBJECT 19.—*Provincial Cotton Committees—Proceedings of the Punjab Provincial Cotton Committee.*

The Secretary's note* was recorded.

SUBJECT 20.—*Provincial Cotton Committees—Co-operation between the Indian Central Cotton Committee and Provincial Cotton Committees—Replies from Local Governments.*

The Secretary's note† was recorded.

SUBJECT 21.—*Invitation to members of the Indian Central Cotton Committee to visit Nanded Cotton Market.*

The Secretary's note‡ was recorded.

SUBJECT 22.—*Present position§ of cultivators of long staple cotton.*

SUBJECT 23.—*Note|| on 27 W. N. Sind Deshi cotton by Mr. G. B. Kotak.*

SUBJECT 42.—*Review¶ of the Committee's work and Research Policy.*

The discussion on these three subjects which were considered together is given in extenso.

The President called upon Mr. Kotak to open the discussion.

Mr. Kotak requested Mr. Jenkins, who, he said, was a technical man, to elaborate any points mentioned in his note.

Mr. Jenkins said that the most profitable distribution of the cultivation of long-stapled and short-stapled cottons was a matter of great importance in the Barrage areas of Sind. He considered it most desirable that authoritative trade opinions should be obtained with regard to the extent to which the Sind *deshi* cotton crop could be developed before affecting adversely the price received by the growers. This subject had been discussed at the last meeting of the Sind Cotton Committee where the general concensus of opinion was that an annual production of 200,000 bales of Sind *deshi* cotton could be readily absorbed by the trade without lowering returns to the growers. He would also like to invite the advice of millowners and trade representatives on the Central Cotton Committee as to the most suitable and useful types of medium and long-stapled cottons for extension in the Barrage areas of Sind. Such information was most essential as the development of long-stapled cotton cultivation in Sind would largely depend upon an adequate premium for quality being paid to the growers of these varieties of cotton. Past experience had clearly shown that the short-stapled Sind *deshi* cotton was higher yielding than the better quality, long and medium stapled American and Egyptian types. Hence an adequate premium for quality was necessary to encourage the cultivation of the superior varieties. With regard to the future policy of the Committee, he thought that all further

* Appendix XVII (page 93).
† Appendix XVIII (page 99).
‡ Appendix XIX (page 102).
§ Appendix XX (page 102).
|| Appendix XXI (page 110).
¶ Appendix XXII (page 112).

research work undertaken should have a definite economic end in view and that preference should be given to schemes which, in the opinion of the Committee, would be likely to produce results of financial benefit to the growers in the shortest period of time. He mentioned the advisability of the demarcation of separate areas for short and long stapled cottons where such segregation was possible and asked for advice as to how this could best be done in areas where no natural boundaries existed. In conclusion, he urged strongly the importance of improving the yield of Indian cottons by the introduction of better cultural methods, etc., as such improvement was the easiest and most rapid means of getting better monetary returns to the growers. He thought that the Committee should devote special attention to this question and encourage to the limit all practical measures brought to their notice for raising the standard of cotton cultivation in India.

Rao Bahadur C. S. Shirahatti said that since his representation to the East India Cotton Association regarding the inclusion of *Kumpta* and *Upland* cottons into Broach Hedge Contract and after many recommendations both from the official and trade bodies, viz., exporters and millowners, the Wiles' Committee agreed to the inclusion of these growths (*vide* paragraphs 16 and 17 of the Report of the Bombay Cotton Contracts Act Enquiry Committee). Sir Purshotamdas Thakurdas, the ex-President of the East India Cotton Association, had himself proposed this inclusion (*vide* page 24 of the Proceedings of the 14th meeting of the Cotton Contracts Act Committee) and the Indian Central Cotton Committee also urged this point. Even after so much pressure, it was a wonder why *Kumpta* and *Upland* cottons had yet been in *Dead Contract*. Both men and money were given by the Central Cotton Committee to get the whole tract covered with improved strains and also for research on cotton. He thought there was no use of all this trouble if staple cottons failed to get due recognition at the consuming stations like Bombay. All efforts of improvements would be like building castles in the air. He therefore urged that early arrangements should be made with the East India Cotton Association to include these varieties in the Broach Hedge Contract.

Dr. Burns doubted whether staple cotton gave lower yield than short staple cotton. He said he would go into the matter personally during the coming season to ascertain whether S.M.C. tract staple cottons were not yielding more than *Kumpta*. The competition between short and long staple cottons, between inferior and superior, and quantity against quality was universal in the Presidency. He pointed out the case of *Goghari* in Gujerat in areas where *1027 A.L.F.* was produced and looked with disfavour on the competition between this and the lower quality though possible higher ginning cottons. He thought that perpetual mixing of long and short staple cotton constituted a great danger and would be very difficult to combat. With regard to the main research policy he thought the time had come when they should lay down a definite policy which ensured the co-ordination between the present work and their past experience to avoid over-lapping and to maintain maximum

efficiency. To illustrate his point he quoted the Pink and Spotted Bollworm schemes tackled in more than one province and the Cotton Physiological schemes which were being studied in three provinces. He thought the principle of a definite economic end should be recognised while sanctioning new schemes so that the money expended was well spent.

Mr. Chunilal B. Mehta was of opinion that the inclusion of *Dharwar, Kumpta* and *Upland* cottons in the Hedge Contract for *Broach* would depress and therefore spoil the Contract value of *Broach* which was a crop of about half a million bales, and also of other cottons tenderable at present against the Broach Contract. He alluded to the subject of malpractices which was considered at the International Congress at Barcelona in September 1929 and it passed a resolution calling upon the Indian Government and the Indian Central Cotton Committee to take steps to remove the impurities in Indian cotton. He regretted that Mr. Roberts, a member of the Indian Central Cotton Committee, should have strongly supported in the following words at the Paris Congress the mixture of American and Indian cotton on the ground that there was an actual demand for such mixture by the cotton industry and that Mr. Roberts had himself been forced to mix cotton to the extent of 25 per cent. :—

"I wish to say a few words on the question of mixing of Punjab-American cotton, on which the Barcelona Congress passed a critical resolution.

We have to supply what cotton the industry requires, and as there is an actual demand for a mixture of American and Indian cotton, it would be suicidal for us if we tried to market a pure Indian cotton. I am at the head of a large cotton plantation which has its own ginning factories, but I must confess that I am obliged to mix 70 per cent. of our cotton, otherwise I should be unable to sell it. I sell about 30 per cent. of our own production pure and unmixed."

He required a clear definition of what was a malpractice and how and whether it should be avoided. Referring to the other points raised by Rao Bahadur Shirahatti, viz., the necessity of warehousing and blind survey, he thought the East India Cotton Association were taking the necessary steps to put a scheme through. As regards yield of cotton he did not think there had been any increase from 97 lbs. per acre from 1922, the year when the Committee started. It had, on the other hand, somewhat decreased and he appealed to the Committee to take steps to increase the yield of the farmer. Turning to Subject 23 he explained the reason why short staple cotton competed with long staple cotton. $\frac{7}{8}''$ and $\frac{7}{8}''$ to $1''$ cotton was being extensively grown in America, which naturally competed with Indian long staple cotton whereas short staple cotton had no competitors in the whole world, a factor which accounted for the small margin between the prices of two staples. The farmer would grow short staple cotton only as long as he got a better price for it in comparison with long staple cotton. He advocated the protection of the interests of the cultivators in spite of the fact that their policy was to increase the production of long staple cotton in India. Turning to Subject 42 he alluded to their classification between short, medium and long staple cottons according to which the crop of long staple cotton (over $1''$) amounted to 12,000 bales only. This was misleading. In America the whole belt grew $\frac{7}{8}''$ and that was why $\frac{7}{8}''$ was their standard

cotton. The Indian short staple cotton was $\frac{3}{8}''$ and the medium was $\frac{3}{4}''$ to $\frac{7}{8}''$. This division of below $\frac{7}{8}''$ as short staple cotton and above $1''$ as long staple cotton therefore required alteration.

Mr. Roberts replying to Mr. Mehta said that his statement at the International Congress only meant that if his competitors were to secure business by mixing 70 per cent. of American and 30 per cent. of *deshi* he would be forced to do the same. The full official context of his remarks should be quoted when it will be found that what he said was very different from Mr. Mehta's extract. He had advocated the trade using the remedy the Indian Central Cotton Committee had put in their hands, viz., marking of bales to secure improvement.

He thought the gain or loss from mixing of cotton did not exceed 5 per cent.; at any rate the figure was of that dimension, whereas the difference between the profits from growing short or long staple may very easily be 25 per cent. to 30 per cent. The evils of mixing when looked at in proper perspective meant far less loss than was possible through too rigid insistence on a tract growing either long staple only or short staple only. At any rate in Sind he did not see that they had sufficient evidence to justify insistence on either "long" or "short" staple in any one tract. In the Punjab the grower exercised his own free will as to what class of cotton he chose to grow but was encouraged to stick to one type of, say, "American" and one type of "*desi*". Similarly in Sind, for giving out to cultivators they should stick to one type of long staple and one type of *desi* as far as possible. This did not prevent them from experimenting with other types on their farms and even among selected farmers.

Referring to Mr. Mehta's statement that yields in India had gone down, he thought a comparison between 1921 and 1922 with subsequent years was misleading. In India the area under cotton was increasing and the yield went down. A similar thing had occurred in America. It was, therefore, unfair to compare the yield of ten years ago with the average yield of to-day. Such a comparison should only be undertaken by an economist and by appropriate statistical methods if the results are to be correctly judged. The general indication from the reply of this Committee to the Government of India in regard to the effect of import tax was that it was for the protection of long staple cotton only. If this was correct then the parity between the *Bengals* and *Oomras* and *Oomras* and *Broach* ought to have relatively widened in recent years. It was therefore difficult to say that the proposed import tax would not affect the prices of short staple cotton also.

Mr. Darlow agreed with Mr. Jenkins on the desirability of increasing the quantity of short staple *desi* cotton and thought that about 200,000 bales were the maximum that could be absorbed in the world without depreciating the price especially as Sind *desi* was a cotton entirely for export. He and his Committee thought that the growers in Sind did not get a good return for their 289F variety firstly because the price obtained for it in Sind was incomparably lower than the price obtained in the Punjab for the same variety. The figures produced by the

Department of Agriculture were the result of growing cotton under favoured conditions whereas the ordinary cultivator did not give it the same attention to get a better return from the short staple varieties. This was borne out by the fact that though *289F* had been cultivated for a considerable number of years in the Punjab, yet its total production had not increased. He was, therefore, in agreement with Mr. Jenkins that an improved variety of *desi* definitely inferior to the long staple variety and one that does not compete with American might be encouraged. It would result in a better return to the grower. *4F* variety was a desirable cotton, but there were certain difficulties in the way of marketing it. It was not appreciated by all Indian mills and Lancashire would only take it at a price. Therefore, one could not export it freely. From the point of view of monetary return an import duty was a good thing but he doubted the wisdom of it. The great majority of Sind crop was an export crop. Import duty only tended to keep the cotton in the province and in some cases where the price remained above world parity, it was the cultivator who suffered even though he sold a portion of his cotton. The balance which he held might have to be sold at a very poor price. As regards mixing he thought that though in theory it was an evil, yet in actual practice the merchants were prompted to sell what their customers asked for, which was in many cases a mixture of Punjab-American cotton with *desi*. He alluded to the recent article in the *Manchester Guardian* in which certain people deplored the mixing of Punjab-American cotton in India, but curiously enough some of the largest firms in Lancashire would not freely buy pure Punjab-American but would prefer to buy a mixture of Punjab-American with *desi*, mixed to the extent of 30 per cent., 40 per cent. and 50 per cent. He asked if it was possible to have legislation to help sell pure 4F when there were customers of this nature. He thought not.

The Vice-President said that they had come to the conclusion after long consultation a year ago that the natural advantages of each tract should be developed to its fullest extent. He disagreed with Mr. Chunilal B. Mehta in regard to the policy of the Committee being in favour of encouragement of long staple cotton and that it was unwise to give up what was a virtual monopoly of short staple cotton. It had yet to be determined whether short staple cotton should be improved by certain methods so that it could be marketed more freely and in this connection he drew attention to the changes that were taking place all over the world. There was a displacement of cotton centres and the figures varied from district to district. Statistics showed that there had been a definite movement of the cotton industry from the Western countries to Asia. In 1913, from the point of view of spindlage, Europe represented 69 per cent. In 1932 the spindlage in Europe had dropped to 64 per cent. which was a definite setback. In America which was one of the biggest cotton consuming countries in the world the spindlage had dropped by 1 per cent. Against that there was more rapid development of manufacture in cotton goods in Asia. In 1913, 7 per cent. of the world's spindles were represented in countries of India, China and Japan. In 1930 it had gone

up to 30 per cent. There was therefore a definite change-over in the manufacturing position throughout the world. Consumption of cotton in Europe had dropped from 53 per cent. in 1931 to 39 per cent. last year. In Asia the consumption of cotton had gone up in that same period from 19 to 35 per cent. He thought, there was a strong case for holding this monopoly of short staple cotton as it was profitable to the grower and there was a great market for it. They could still find an increasing consumption for their Indian cotton. It must be remembered that there was an ever increasing demand for long stapled cotton in India with the spread of education owing to the fact that Indian mills wanted finer cotton than the short stapled which was only used for making rough goods. He did not think it was possible to definitely say that they should commit themselves to a policy of trying to force the grower to grow a specified variety of cotton. The policy of the Committee should be that the cotton best suited for the tracts and which would be profitable to the grower of long or short staple cotton should be encouraged. As regards Hedge Contracts, he pointed out that in previous discussions the view had been strongly held that a wider Hedge Contract would depress prices. To see what effect it might have on the grower, the Committee commenced an investigation into the marketing of cotton in certain tracts. Something had been accomplished in the reduction of the number of Hedge Contracts during the last few years. In the matter of warehousing Rao Bahadur Shirahatti's recommendations had been gone into by the Wiles' Committee and he understood that they had recommended proper licensing of warehouses but these matters were not easy and they took time and besides most of them were for the trade. He considered that a lot of trouble would be solved if they could get introduced the system of licensing of gins and presses which would do away with malpractices. That again was a difficult matter. During the last year the Central Cotton Committee approached a number of people and they were of opinion that perhaps the time was not ripe for introducing legislation.

Sardar Rao Bahadur Bhimbhai R. Naik was in favour of encouraging the growth of such cotton which gave the best returns to the cultivators. For instance, South Gujerat, where after many years of experience and labour the Agricultural Department introduced a good quality of *1027* variety which was now reported to have been mixed with the inferior type of *Goghari*. The reason for this was obvious. It was because it paid the cultivators. He was of opinion that unless not only the quality but the quantity could be improved, no step should be taken by the Committee. In short, the policy of this Committee should be to encourage such growths which might be suitable to the tract and which would be freely marketable and which brings the best returns to the grower. As to the inclusion of *Upland* and *Kumpta* cotton into the Broach Contract, though the question was brought up before the Wiles' Committee of which he was a member and subsequently taken up by the East India Cotton Association, no final decision had been arrived at. The President of the East India Cotton Association seemed to be very keen over the interest of the growers and he promised to do what he could do in the matter. Regarding the question of mixing he could not understand why Lancashire

and Japan did not take pure cotton and mix it themselves. Why should it be mixed in India and spoil the reputation of Indian cotton? In America every sample was examined before it was exported. Mixing was being done by merchants and ginners. The growers were not at all responsible for mixing. Sir Joseph Kay referred about licensing of gins and presses in India. He was in favour of measures being taken for licensing gins and presses and the stoppage of mixture and the watering of cotton. If mixing was done by agriculturists the evil should be combated by propaganda and if by the gins and presses by legislation.

Sardar Sampuran Singh's experience was different to that of Sardar Rao Bahadur Bhimbhai Ranchodji Naik. In the Punjab *4F* and *289F* yield from a maund to two maunds more than *desi* cotton. With improved methods of agriculture, and greater irrigation facilities long stapled cotton promised higher rate and better yield and their cultivation should be encouraged. The problem of marketing presented no insuperable difficulties. The quantity grown was not sufficient for Indian requirements and the country had to get additional supplies of long staple cotton from abroad. He suggested that an import duty would increase the production and also help the grower. As regards the question of finding markets for this kind of long stapled cotton in foreign countries, that was really a question of competition, and on that point some sort of concession would have to be sought from Great Britain, i.e., Lancashire, Liverpool, etc. He thought Indian cottons having a bad reputation in European markets was the reason of Lancashire and others preferring to buy mixed cotton at a lower price. If once they could establish a reputation for supplying pure cotton, they would have no difficulty in finding a market.

Mr. Y. G. Deshpande thought that the reason why long staple cotton did not give a reasonable return was due, not to what the previous speakers had attributed it to, but to the fact that the yield per acre was only 50 to 54 lbs. in India as against 154 lbs. in America and until methods of cotton cultivation were improved upon and the cost of production reduced no improvement could be expected. He continued that cotton experts of the Agricultural Department who had their training in England where no cotton was grown were expected to teach them something of which they themselves had only a theoretical knowledge. He would prefer practical farmers from America even at high salaries. He referred to the paucity of Government experimental farms in the Central Provinces and Berar and said that agriculturists had to go long distances to study their methods which were very few. The reason that the yield per acre being too low was because proper methods were not known to the so-called experts working there. The methods suggested against mixing by means of licensing, etc., were worthless. The representatives of European, Japanese and Indian firms mixed cotton of various kinds in Amraoti. The growers were not responsible for sending the mixed quality cottons to England and the Continent and for the bad reputation earned, but the big traders were responsible for this. To make a long story short, the Directors of Agriculture were not adopting the methods of cultivation which had proved successful in other civilised countries.

Mr. Carbonell agreed with Mr. Darlow that 200,000 bales of Sind cotton could be absorbed by the trade. He advocated the production of an improved long staple cotton of one variety only, if possible with a long and silky staple, as the cotton now grown in Sind had a rough staple and spinners did not like it.

Mr. Vonesch was in favour of encouraging the growth of indigenous varieties. He deprecated the tendency of the Agricultural Department paying more attention to long staple than to indigenous cotton during the last five to ten years. According to the data supplied by the Sakrand farm the return to the grower for 27 W.N. would be about Rs. 11 more per candy than for the next best foreign variety. This calculation was based on the average valuation for the last three years and the result would favour the *desi* variety even more if the present low prices for staple cottons had been taken as a basis. Alluding to 289F and 285F which were quite popular in the Punjab five or six years ago, he stated that they had undoubtedly received a distinct set-back since then. In his opinion this was due to the unremunerative return to the grower, possibly because the buyers were no longer prepared to pay the full premium owing to the fear of admixture with inferior cotton.

Up to very recently there was a shortage of staple cotton due chiefly to the deterioration of the American crop, but to-day there was a over-supply of long stapled cotton. At present India held to all intents and purposes a monopoly of short stapled cotton and in his opinion it would be dangerous to try and compete with countries which were eminently more suited for the growing of the long stapled qualities. He thought that experiments with long stapled cotton should be strictly confined to canal irrigated tracts and that the research for better yielding indigenous types suitable for those districts which depended on the yearly rainfall should be more vigorously pushed than in the past.

Rai Bahadur Tharumal Bilaram pointed out that long staple cotton could not be grown everywhere and was in favour of demarcation of areas. He thought it a necessity which should be followed up. In Sind, for instance, the Southern Divisions may give better results for long staple cotton than in Upper Sind where there were severe frosts and climate was very hot; also in a part of central division the soil was unfit for growing long staple cotton as the tract was full of white ants which were more destructive to this variety than to *desi* cotton which is more hardy. The Barrage would probably stimulate its growth by providing an earlier supply of water. He thought that long staple cotton would not thrive better under those conditions than short stapled.

Mian Nurullah was in favour of the policy of *laissez-faire*. He thought it dangerous to demarcate areas. His experience of Lyallpur had been that more often than not long staple cotton had failed and that the indigenous short stapled had flourished. *Zemindars* did not like to put all their eggs in one basket and wanted to protect themselves by sowing both *desi* and American cotton.

Mr. Sane said that conditions in Gujerat were different to those of the Punjab and Sind. Like *Pulichai* cotton in the Madras Presidency,

Goghari, an inferior variety of cotton, was rapidly spreading in South Gujerat where it was evidently put in and not an indigenous variety naturally suited to the conditions under which cotton was grown in this tract. He wished that that difference should be borne in mind before the policy regarding mixing either in the Punjab or in Sind was decided upon.

Mr. Burt referred to the ever-changing conditions of the cotton industry and also to the effect on it of the artificial silk industry. They were living in abnormal times and should watch the position carefully. He was struck by the trade estimate that an additional two lakhs of Sind *desi* could be absorbed without upsetting the market, but caution was advised in increasing short staple cotton beyond this amount. He was very pleased indeed to see in the Secretary's note a table showing the present trend of export of different types of cotton. That was information in which many trade members would be interested, and he was glad to say that its compilation had been taken again. If they could have more such information giving similar figures for the consumption of different types of Indian cottons in the mills, they should be able to frame some kind of a picture of the commercial demand. This was an extremely important problem because one could not say that all was well with the cotton grower in India. The area under cotton had shrunk; their production had shrunk from something like six million bales to 4½ million bales during the past few years. That had not been solely due to bad weather or anything of that kind. That was a very important change and they should examine the reasons for that shrinkage of cotton areas. They should make every effort to study the question so that they may give assistance to the cotton grower wherever likely to be effective. He agreed with the Vice-President that what they wanted to do was to develop each tract to the fullest extent of its natural resources. The Committee should make a continuous study of these problems. The question of mixing had again assumed importance in that debate and he did feel compelled to remind the Committee of one or two points which had loomed very large in the past. He was very glad that Mr. Vonesch drew attention to the fact that mixing of Punjab-American had definitely lowered the standard price of Punjab-American throughout India and the world at large and had done a definite harm. He did not think they could take the same view as Mr. Roberts that mixing was not very important. First of all the Indian millowners told them that they could not rely on Punjab-American and did not use it so largely as they might. That seemed to be a very serious state of affairs. The other point was that it was becoming increasingly difficult to secure pure seed of Punjab-American cotton. Year by year seed had been supplied, and they could not expect the farmer to grow pure cotton if mixing was done in the ginneries. They were now told that it involved a premium of something like a rupee per maund to secure pure seed of American cotton in the Punjab and that was another aspect of mixing. They should again take up the question and see if they could not do something to protect the growers of pure cotton.

Rao Bahadur M. G. Deshpande related his experience of improved *Verum* in the Central Provinces which superseded *Roseum* by reason of the good outturn and prices. He spoke appreciatively of the work done by the Agricultural Department, but complained that Government were not allowing them sufficient funds to spread propaganda on a more extensive scale. He added that the Department were doing their best to instruct the cultivators and wanted to know from Mr. Deshpande as to why these same cultivators about 12 years ago had bumper crops. And during those times he doubted whether instructions were given by the Agricultural Department. During the last four or five years they were not getting good returns due to the vagaries of nature. As regards mixing he was of opinion that if it was done at the factories they should have some regulation to prevent it as mixing must be discouraged.

SUBJECT 24.—*Final Report* on Gujerat Boll-worm Research Scheme.*

The Final Report was approved and it was decided that it should be sent to the Imperial Council of Agricultural Research to be published as a scientific monograph. It was also agreed that in future a summary of the results in non-technical language should be circulated to members in the place of the full report.

SUBJECT 25.—*Gujerat Boll-worm Clean-up Scheme—*

(*a*) *Progress Report.**

(*b*) *Proposed extension* of—.*

The progress report was approved. The scheme was extended for fourteen months from February 1933 to March 1934 at a total estimated cost of Rs. 65,674.

SUBJECT 26.—*Proposed new Agricultural Research Schemes—Scheme* for the improvement of Comilla cotton in Bengal.*

The scheme was sanctioned at a cost of Rs. 18,540 spread over a period of five years.

SUBJECT 27.—*Proposed new Agricultural Research Schemes—Scheme* for the breeding of annual varieties of Nadam cotton grown in Salem and Coimbatore Districts of the Madras Presidency.*

The scheme was sanctioned for a period of five years at a cost of Rs. 13,730 subject to review at the end of three years and also to the local Government providing the necessary land.

* Not printed.

SUBJECT 28.—*Proposed new Agricultural Research Schemes—Scheme* for the investigation of Pink and Spotted Boll-worm pests in Hyderabad State.*

The scheme was sanctioned for three years at a total cost of Rs. 21,548. It was also agreed that any supplementary grant necessary for transport, re-conditioning and erecting of the insect proof cages to be transferred to the scheme from Cawnpore might be applied for at the next meeting of the Committee.

SUBJECT 29.—*Proposed new Agricultural Research Schemes—Scheme* for the investigation of Spotted Boll-worm in the Punjab.*

It was decided that the scheme should be referred back to the Director of Agriculture, Punjab, for revision.

SUBJECT 30.—*Proposed new Agricultural Research Schemes—Scheme* for an exhaustive survey of cottons in Rohilkhand and Bundelkhand, United Provinces.*

The scheme was sanctioned for a period of three years at a total estimated cost of Rs. 15,800.

SUBJECT 31.—*Seed Distribution and Extension Schemes—Programme of the working of the ginnery at Lyallpur.*

The Secretary's note* was recorded.

SUBJECT 32.—*Proposed new Seed Distribution and Extension Schemes—Scheme* for a grant for the formation of Zemindara Co-operative Sale Societies for the sale of all farm crop produce, including Punjab-American cotton on the lines of the Okara Zemindara Association.*

The Committee sanctioned an annual grant of Rs. 5,000 for a period of three years subject to the following conditions :—

(*i*) that the Punjab Government gives an equal grant for the same period,

(*ii*) that the Co-operative Sale Societies guarantee to undertake, from the outset, the sale of pure, graded American *kapas* and that, as soon as possible, they will also organise the separate ginning and baling of pure American cotton (normally this stage should begin from the third year),

(*iii*) that the Committee's grant will be spent entirely on expert managing staff for the Societies and for organising staff, and

(*iv*) that if the scheme, as now modified, be accepted by the Punjab Government, a detailed budget will be presented for the sanction of the Standing Finance Sub-Committee.

* Not printed.

SUBJECT 33.—*Proposed new Seed Distribution and Extension Schemes—Scheme* for the grant of Rs. 25,000 for two years to enable the Punjab Agricultural Department to sell its pure seed at rates more nearly to bazaar rates for ordinary seed.*

The following resolution proposed by *Mr. Burt* and seconded by *Mr. Sane* was carried unanimously :—

RESOLUTION 19.—"That the scheme now submitted by the Director of Agriculture, Punjab, be withdrawn and a revised scheme be submitted for consideration at the next meeting of the Committee."

SUBJECT 34.—*Proposed new Seed Distribution and Extension Schemes—Application* for a Seed Storage Scheme in the Navsari District of Baroda State.*

The scheme was sanctioned for five years at a total estimated cost of Rs. 19,000 on condition that not later than 1934 the Baroda State would make its own arrangements for seed multiplication in the Navsari District on an area of 1,000 to 2,000 acres.

SUBJECT 35.—*Agricultural Research—Report‡ of the Agricultural Research Sub-Committee.*

The President moved and *Mr. Vonesch* seconded the following resolution which was carried unanimously :—

RESOLUTION 21.—"That the Report of the Agricultural Research Sub-Committee be adopted."

SUBJECT 36.—*Technological Research—Progress Report‡ of the Director, Technological Laboratory.*

The following resolution moved by the *President* and seconded by *Mr. Jenkins* was carried unanimously :—

RESOLUTION 22.—"That the Progress Report of the Director, Technological Laboratory, be adopted."

SUBJECT 37.—*Technological Research—Report§ of the Technological Research Sub-Committee.*

The President moved :—

RESOLUTION 23.—"That the Report of the Technological Research Sub-Committee be adopted."

This was seconded by *Mr. Kolhe* and carried unanimously.

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* Not printed.

† Appendix XXIII (page 116).

‡ Appendix XXIV (page 119).

§ Appendix XXV (page 126).

SUBJECT 38.—*Report of the Special Sub-Committee on the status of Committee servants.*

Mr. Burt proposed and *Mr. Richards* seconded the following resolution and memorandum which were carried unanimously :—

RESOLUTION 24.—"The Indian Central Cotton Committee regrets to find that the procedure laid down in Government of India's letter No. 1858-Agri., dated the 5th December 1931, referred to in the Committee's resolution No. 22, dated 15th December 1931, has failed to achieve its object. On the contrary, it has led to results which were contemplated neither by the Committee nor by Government. These results which are summarised in the Memorandum attached involve the impairment of the Committee's statutory control over the application of the Cotton Cess Fund, its ability to guide and direct the research work which it finances, its control over the scientific research staff which has been built up in the last nine years, and its ability to secure qualified research workers in the future. The Committee is impelled to request the Government of India to reconsider the decision contained in their letter quoted above as the objects for which the Committee was constituted by the Legislature are likely to be defeated."

Memorandum as finally approved.

"(1) The procedure which requires expenditure from the Committee's grants to be budgeted for as ordinary expenditure of the Provincial Department of Agriculture leads, in practice, to delay and sacrifices that elasticity which has hitherto been a valuable feature of the Committee's work.

(2) The Committee is losing the services of specialist officers trained at its expense and who had gained experience by work on Committee's schemes, as these men have been replaced by retrenched Government servants.

(3) The Committee's servants have lost the prospect of fairly continuous service which they enjoyed previously. When an old scheme terminates and a new scheme is sanctioned, instead of receiving a preference as they were having hitherto, they are treated as new entrants to the Agricultural Department in certain provinces and have to comply with the provincial regulations regarding recruitment which lay emphasis on qualifications not essential for men already specially selected for their research ability.

(4) The difficulties pointed out in (2) and (3) render nugatory the Committee's scheme for the training of cotton research workers.

(5) As Government are already aware, a very unsatisfactory position has arisen in that several employees of the Committee being now treated as temporary Government servants have been rendered ineligible for membership of the Committee's Provident Fund.

(6) Generally a position has been reached where an accounts ruling has led to a material interference in substantial matters of policy."

SUBJECT 39.—*Report* of the Research Students Selection Sub-Committee.*

The following resolution which was moved by the *President* and seconded by *Mr. Kolhe* was carried unanimously :—

RESOLUTION 25.—"That the Report of the Research Students Selection Sub-Committee be adopted."

* Appendix XXVI (page 130).

SUBJECT 40.—*Report* of the Standing Finance Sub-Committee :—*

(*a*) *Balance Sheet,*
(*b*) *Financial Statement,*
(*c*) *Revised Estimates*—1932-33,
(*d*) *Budget*—1933-34,
(*e*) *Auditors' fees.*

The President moved the following resolution which was seconded by *Mr. Kolhe* and carried unanimously :—

RESOLUTION 26.—"That the Report of the Standing Finance Sub-Committee be adopted."

"That the Revised Estimates for 1932-33 be approved."

"That the Budget for 1933-34, as now amended, be sanctioned."

SUBJECT 41.—*Half-yearly Report† of the Publicity and Propaganda Officer.*

The Vice-President proposed and *Mian Nurullah* seconded the following resolution which was carried unanimously :—

RESOLUTION 16.—"That the Report of the Publicity and Propaganda Officer be approved."

SUBJECT 42.—*Review‡ of the Committee's work and Research Policy.*

It was considered along with Subjects 22 and 23.

SUBJECT 43.—*Proposed introduction of a common unit§ for the purchase of seed cotton throughout India.*

The subject was discussed at some length and its further consideration was postponed to the next meeting so that more information might be obtained in the meanwhile from some of the cotton centres.

SUBJECT 44.—*Greater|| use of Indian cotton in the United Kingdom—Implementing Article* 8 *of the Ottawa Agreement.*

The discussion on this subject is given in extenso.

Mr. Burt said that in his opinion the importance of Article 8 of the Ottawa Trade Agreement lay in the fact that for the first time the Committee was promised the active co-operation of His Majesty's Government in the United Kingdom in its efforts to secure a better footing for Indian cotton in the English market. For a number of years the Indian Central Cotton Committee in the interests of Indian cotton growers had tried, and not without success, to interest the Lancashire cotton trade in new and improved types of Indian cotton and in those efforts it had been supported by the High Commissioner for India and the Indian Trade

* Appendix XXVII (page 131). † Appendix XXVIII (page 153).
‡ Appendix XXII (page 112). § Appendix XXIX (page 161).
|| Appendix XXX (page 163).

Commissioner. But this was the first time that the Home Government had promised their active support. It would be noted that this promise was given in the widest terms and applied to " any practicable scheme that may be agreed upon by the manufacturing, trading and producing interests in the United Kingdom and India for promoting whether by research, propaganda, or improved marketing the greater use of Indian cotton in the United Kingdom." The report of the Indian Delegation contained some suggestions as to what steps might be taken but it might be stated in passing that Article 8 of the Agreement was not limited to those proposals but was absolutely general in its application. The Committee was aware that His Majesty's Government had taken steps to fulfil their promise and indeed the Board of Trade took the initiative in promoting the formation of a Committee in Lancashire and he suggested that the present occasion was appropriate for the Indian Central Cotton Committee to consider that question. At that stage he ventured to remark that the issue before the Committee was a comparatively simple one, viz., to suggest any steps that could be taken at that juncture to take advantage of Article 8 of the Ottawa Agreement. The Committee was not concerned with the Agreement itself— on that point the Indian Legislature after weeks of discussion came to the definite conclusion that it was in the best interest of India that the Agreement should be ratified. Nor was the Committee specially concerned with the question whether Article 8 of the Agreement was of great, moderate or small value. On that point opinions differed and only the future could decide. What the Committee was concerned with was that Article 8 offered at least a chance of some trade development at a time when every means of giving the cotton grower some assistance should be explored. He did not overlook the fact that Indian cottons were at present above world parity and hence export was very restricted. They all understood that that position was a temporary one. But he would deal briefly with one other general point. It had been suggested by some that it was paradoxical that India should be exporting some of her best cottons and seeking to develop the export market while she was actually importing long staple cotton for her own mills. There was, in point of fact, no real contradiction here, and it was a well-known fact that in average years there was a surplus of certain staple cottons like Punjab and Sind American and Tinnevelly which needed an export market. The paradox disappeared if they divided cotton into three classes—short, medium and long staple instead of speaking of long and short-staple only. Of short staple cotton India was a large exporter, of medium staple a moderate exporter in average years, of long staple cotton an importer at present. He need not labour that point as the Committee's own pamphlet on the improvement of cotton growing gave a full analysis of the position but he would mention that the 470,000 bales of foreign cotton imported into Bombay in 1930-31 (to which reference was made in the East India Cotton Association's letter) were made up of Egyptian 149,000, East African 179,000, Americans 140,000, Persian and others 2,000. In other words, at least 328,000 bales of the 470,000 imports were of truly long staple cotton—longer than was produced in India

and longer than India was likely to produce in the near future. In other words, so long as the present trend towards finer spinning continued, these imports of long staple cotton from Egypt and East Africa would continue whatever the size and quality of the Indian crop. An additional 200,000 bales of Sind-American, for example, would not materially affect the demand for Egyptian cotton. There was nothing surprising in that as even America used regularly substantial quantities of Egyptian cotton.

Enclosure 2 to the Secretary's note showed that India exported annually substantial quantities of the following medium stapled cottons—*Punjab* and *Sind-American, Surats* and *Broach, Westerns* and *Northerns, Tinnevellys* and in some years *Cambodia.* All of these cottons could be used in larger quantity in the United Kingdom without any fundamental machinery changes—all could be produced in greater quantity than at present were the demand greater. He thought that it was clear that it would be to the interest of Indian cotton growers if they could enlarge the demand *for* those cottons. It might be added that the Ottawa Delegation were given definite instances of firms who during recent years, and until Indian cotton went out of parity, had used larger quantities of Indian short staple cotton than they had done in the past, having made the necessary changes in their machinery to enable them to use Indian cotton to advantage. The question for immediate consideration was what were the most profitable lines of work and what recommendations, if any, the Indian Central Cotton Committee should make to the Government of India. The report of the Ottawa Delegation indicates one possible line of action, viz., an improvement in the marketing of Indian cottons *at the Lancashire end.* It was definitely stated by the Lancashire representatives at discussions at which he was present that the larger stocks and wider selection of American cotton in Liverpool, as compared to stocks of Indian cotton, did encourage the spinner to buy American rather than Indian. In reply to specific questions, representative spinners stated that they did not need single bale sampling of Indian cotton. But they did consider that the Lancashire spinner using Indian cotton had a narrow range to select from and experienced real difficulty in repeating a purchase. Correspondents in England of Bombay and Karachi exporting firms told him that while they were willing to sell Indian cotton to the Lancashire spinner on whatever terms suited him, they could not be expected to finance the carrying of stocks out of proportion to actual sales. This statement was confirmed by Messrs. Ralli Brothers' letter in the papers before them. The Indian Delegation attached great importance to the removal of any marketing difficulties which existed at present. No communication had yet been received from the Lancashire Committee of which Sir Richard Jackson was Chairman but they did know that that point was being carefully examined. It was obviously desirable that existing trade connections should be utilised to the fullest extent in any scheme of that kind and it was there that the Indian Central Cotton Committee could undoubtedly give very important assistance. It was understood that the new Lancashire Committee had substantial funds and it should not therefore be difficult to formulate a practical scheme.

He ventured to suggest for consideration one other matter which the Indian Central Cotton Committee might take up, viz., the prompt supply to the new Lancashire Committee of information about the characteristics and supply of various types of Indian cottons—especially of improved cottons which had reached a commercial scale. The work done in the Committee's Technological Laboratory had not yet become widely known to Lancashire spinners—it would be worth while to send a selection of technological bulletins and circulars to the Indian Trade Commissioner for distribution. Doubtless other methods would suggest themselves to members of the Committee. What he would urge was that they make a start with that important question. It was important that the Indian Trade Commissioner should be constantly in possession of the latest information and that the Government of India and especially the Imperial Council of Agricultural Research should be kept in a position to instruct or advise him from time to time. He did not himself think that the Committee should wait until proposals were received from the new Lancashire Committee and thought that they should arrange to have the question fully studied in the meantime. Possibly it was a matter for the Technological Research Sub-Committee to deal with—that was a point for consideration. It might also be possible for a few of the members of the Indian Central Cotton Committee, including in that term the additional members of the Technological Sub-Committee, who may be visiting England that year to establish personal contact with the new Lancashire Committee and advise them. He commended the following resolution for their consideration :—

"(1) The Technological Research Sub-Committee be instructed to take up the question of the best means of utilising Article 8 of the Ottawa Trade Agreement and to collaborate with the Committee established in Lancashire, and (2) any member of the Sub-Committee or of the Indian Central Cotton Committee visiting England during 1933 be invited to get into touch with the Lancashire Committee."

Mr. Vonesch was perfectly sure that as the majority of the cottons grown in India were of short staple any propaganda done by the Committee to increase the consumption of Indian cotton in Lancashire would be of great value. The attention of Lancashire was now focussed on Indian cottons but Lancashire spinners complained that they were handicapped in their purchases of Indian cotton for want of ready stocks. He thought that if there was sufficient demand from Lancashire for Indian cottons there would be no difficulty in getting stocks laid down in Liverpool. That was how the development with regard to American and Egyptian cottons took place. He understood that Lancashire spinners were handicapped in the use of Indian cotton on account of their machinery, and that certain mills were making such alterations in their machinery as to handle coarser Indian cottons. He would say that provided the Indian Central Cotton Committee did not take any action which the export trade considered injurious to their interests, the full co-operation of that section of the trade would be readily forthcoming.

Mr. Chunilal B. Mehta complained that in spite of a Committee having been appointed in Lancashire and Mr. Burt's visit to Ottawa no practical scheme had been formulated. Though it was reported that Lancashire mills were slowly changing their machinery for spinning short staple

cotton, the resultant effect might not be felt for years. He agreed with the opinion of Mr. Vonesch that better marketing facilities and propaganda were necessary in Great Britain and if there was demand, stocks would surely follow. He instanced Japan who consumed about 1,600,000 bales and where no propaganda had been made. Similarly with Italy and Germany who also used a fair amount of Indian cotton without any propaganda being necessary. Supply was regulated by demand and if there was enough demand, the traders would see that necessary stock was kept. The principal factor for the grower was to see that he got a good price and Indian cottons were also being sold in foreign markets at a higher parity even though Great Britain did not buy much. The only practical way to help the Indian cotton grower was for Great Britain to give preference to Indian cotton in Lancashire. He suggested the imposition of an import duty on foreign cotton to protect Indian cotton. The crux of the matter was the relative cheapness of Indian cotton and if it was so, Lancashire would certainly buy it.

The Vice-President emphasised the need of developing the Lancashire market which was going to take up the increased production of short-staple cotton. It was a known fact that a certain amount of trade had moved from Lancashire particularly the trade in cloth of 20 to 40's counts. Lancashire now dealt with specialities of cloth made of short-staple cotton and in the finer quality cloth, leaving the medium quality of goods to her competitors, mainly India and Japan. If this fact were accepted, it seemed certain that demand for short staple cotton and consequent better prices must follow. This attempt to develop a market for Indian cotton should be welcomed. He referred to the difficulty of Lancashire not being equipped to use short staple cotton and now that the prospects of adapting their machinery to suit short staple Indian cotton were promising, it would be advisable to get into touch with the Indian Trade Commissioner and others who would help to develop markets for short staple cotton in Lancashire.

Sardar Sampuran Singh saw no gain to India in the Resolution passed at the Ottawa Conference. He referred to the small quantity (270,000 bales) exported to England compared with the infinitely greater quantity (2,206,000 bales) exported to Japan and China against whom India had put a duty of 50 per cent.

Mr. Burt said that the duty of 50 per cent. had no connection with the Ottawa Agreement, but was imposed at the request of the Indian mill industry.

Sardar Sampuran Singh referred to the impossibility of India, which is a poor country, buying from the Western countries where labour was dear in preference to Eastern countries which could afford to sell their cloth at much lower prices. India was selling her cotton to China and Japan and at the same time imposing a duty against their goods. The pious hope expressed during the Ottawa Conference was not sufficient. The Indian grower expected something more tangible.

Mr. Ramamurty in order to take advantage of the friendly readiness of England to buy more Indian cotton suggested an increase in the production of medium staple cotton in such areas as were naturally suitable to their growth. In Madras they were already thinking of extending the cultivation of Cambodia cotton in paddy lands as a second crop and the signs were hopeful. But the question was whether there would be a sufficient demand from England at a remunerative price without increased production resulting in the lowering of prices. In the Godavari Delta anything less than Rs. 40 an acre would not be regarded as a fair return to grower. He would like an assurance from Mr. Burt that the extension of area under medium staple cotton would not be followed by a consequent lowering of prices.

Mr. Richards referred to the great increase in production of Bengals cotton which might be expected when Pink Boll-worm control was extended to all the affected areas, which might well amount to ten lakhs of bales. Sind expected to add another two lakhs of Bengals type. He therefore disagreed with Mr. Mehta that there was little need to encourage fresh markets.

Mr. Burt and Mr. Vonesch had indicated that one obstacle to the more rapid extension of use of Bengals in England was the absence of a ready market in Lancashire carrying sufficient stocks. He suggested that the Committee might properly employ some of its funds to provide market facilities through competent trade organisation and to finance the carrying of adequate stocks in Lancashire.

Mr. Burt replying to Mr. Richards' remarks on the subject of propaganda in Lancashire said that no Indian money was going to be spent on this. He understood that £10,000 had already been sanctioned in England in connection with propaganda. Answering Mr. Ramamurty he thought there would be no difficulty in selling the 3 lakhs of bales of Cambodia likely to be produced in Madras, as this type of cotton was very popular in Lancashire and elsewhere. As regards prices he could not prophecy.

Mr. Vonesch concurred that there was still a demand for Cambodia cotton in Lancashire.

Continuing Mr. Burt said that there was no question whatever of Lancashire giving a promise about the use of Indian cotton in return for any concession regarding duties on piecegoods in India. The duties on piecegoods in India were determined by the Indian Cotton Industry Protection Act and had been brought about by the Indian Legislature. Import duty on piecegoods had been imposed at the request of the Indian millowners because of the depression in exchange and several other causes and the Ottawa Agreement did not contain anything about the protected cotton goods. There was no obligation whatsoever to India to give any special preference to Lancashire. The very small list of items included in the schedule related to a number of miscellaneous things which had not been protected and did not refer to piecegoods at all. One other point made was that Lancashire would buy Indian cotton in order to produce cotton goods for sale in India. He did not see how

Lancashire with high wages would be able to undersell Indian mills. That was a practical point. The use of Indian cotton in Lancashire could be increased first of all for the domestic market in the United Kingdom where quite a large amount of cloth of low counts was used and secondly for export to other countries. He quite agreed that Lancashire could not compete with Indian mills. His original proposition was—

"That that matter should be referred to our Technological Research Sub-Committee for study and report."

He would also add "that any member of the Committee or of the Technological Research Sub-Committee who may be visiting England during this year be asked to get into touch with the members of the Lancashire Committee".

Mr. Roberts in seconding the resolution said that since the Committee were anxious to popularise Indian cotton they should try and open up as many markets as possible. In England £10,000 had already been set aside to further the interests of Indian cotton in Lancashire.

Mr. Y. G. Deshpande thought that Article 8 of the Ottawa Agreement was only a pious expression on the part of England to co-operate with India. He supported Messrs. Mehta and Sardar Sampuran Singh that good will alone was not sufficient. The British Government had taken very much more from us by way of protection and they wanted sufficient return for it. No doubt import duty had been placed on piecegoods but there were so many commodities imported into India free of duty.

Mr. Chunilal B. Mehta proposed the following amendment:—

"The Indian Central Cotton Committee is of opinion that the practical method of increasing the use of Indian cotton in Lancashire is to give preference to Indian cotton or to fix a quota for Indian cotton."

Mr. Y. G. Deshpande seconded the amendment.

Sardar Rao Bahadur Bhimbhai R. Naik thought the subject was referred to the Committee only for information. He did not see the advantage of passing such a resolution as at present they had not got the type of cotton Great Britain required. There was time enough to take up the question five years hence when India would have an exportable surplus. He asked Mr. Burt to accept the amendment of Mr. Mehta. The imposition of the 50 per cent. duty on Japanese goods meant the loss of one of their best customers and India now wanted something in return from Great Britain. He was of opinion that the high tariff imposed on Japanese goods would benefit Lancashire more than India, and therefore Indian growers are entitled to have some benefit from England.

Mr. Burt accepted the amendment with a slight alteration.

RESOLUTION 1.—"The Indian Central Cotton Committee is of opinion that the practical method of increasing the use of Indian cotton in Lancashire is to give a tariff preference to Indian cotton by levying

a duty on non-Empire cottons. In the meantime (1) the Technological Research Sub-Committee be instructed to take up the question of the best means of utilising Article 8 of the Ottawa Trade Agreement and to collaborate with the Committee established in Lancashire, and (2) any member of the Sub-Committee or of the Indian Central Cotton Committee visiting England during 1933 be invited to get into touch with the Lancashire Committee."

The resolution as amended was carried.

SUBJECT 45.—*Central Provinces Seed Distribution and Extension Scheme—Utilisation* of savings in the current year for the grant of bonus to growers of Verum cotton.*

The President proposed and *Mr. Y. G. Deshpande* seconded the following resolution which was carried unanimously :—

RESOLUTION 20.—" That the Director of Agriculture, Central Provinces, be asked to submit the scheme in a different form."

SUBJECT 46.—*Provincial Cotton Committees—Proceedings of the Sind Cotton Committee.*

The Secretary's note† was recorded.

The following resolution proposed by *Mr. Richards* and seconded by *Sardar Rao Bahadur Bhimbhai R. Naik* was carried with acclamation :—

RESOLUTION 27.—" That the Indian Central Cotton Committee expresses its great appreciation and conveys its thanks to the Karachi Chamber of Commerce for the kind way in which they have provided the Committee with all the facilities for holding its meeting at Karachi."

The President thanked the hosts at Karachi for their kindness in having made the stay of the members of the Committee at Karachi comfortable, and all the various Associations and individuals, the Karachi Joint Cotton Committee and the Sind Cotton Committee for their attendance at the meeting and for advising and helping the Committee in its deliberations.

He further thanked all the members of the Committee for their courtesy and patience in helping him in conducting the proceedings satisfactorily.

Mr. Chunilal B. Mehta proposed a vote of thanks to the President for the patient and tactful manner in which he conducted the meeting and wished to put on record the satisfactory work of the Secretary during the period under report.

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* Appendix XXXI (page 171). † Appendix XXXII (page 172).

Mr. Jenkins thanked the Indian Central Cotton Committee for their courtesy in accepting the invitation of the Sind Cotton Committee to hold this meeting at Karachi. He felt that this meeting of the Committee in Karachi had created considerable interest and certainly had brought the commercial community in Sind into closer touch with the Committee and its work.

Mr. Darlow on behalf of the Karachi Joint Cotton Committee thanked the members of the Indian Central Cotton Committee very much for inviting them to take part in their deliberations, and wished to express his appreciation of the fact that for the first time the Committee had held its meeting in Karachi and also to express the hope that it would not be the last time and at some future occasion, not very far distant, it would hold one of its meetings again in Karachi.

P. H. RAMA REDDI.

RESOLUTIONS.

No. Page.

Greater use of Indian cotton in the United Kingdom.

1 "The Indian Central Cotton Committee is of opinion that the practical method of increasing the use of Indian cotton in Lancashire is to give a tariff preference to Indian cotton by levying a duty on non-Empire cottons. In the meantime (1) the Technological Research Sub-Committee be instructed to take up the question of the best means of utilising Article 8 of the Ottawa Trade Agreement and to collaborate with the Committee established in Lancashire, and (2) any member of the Sub-Committee or of the Indian Central Cotton Committee visiting England during 1933 be invited to get into touch with the Lancashire Committee" 35

Appointment of Vice-President.

2 "That Sir Purshotamdas Thakurdas be appointed Vice-President for the year 1933–34" 10

Standing Finance Sub-Committee.

3 "That the following members be appointed to form the Standing Finance Sub-Committee for the financial year 1933–34 :—

Sir Purshotamdas Thakurdas,
Dewan Bahadur Sir T. Vijayaraghavacharya (*ex-officio*),
Sir Joseph A. Kay,
Mr. S. D. Saklatvala,
Sardar Rao Bahadur Bhimbhai Ranchodji Naik,
Mr. J. Vonesch,
Rao Bahadur G. R. Kothare,
Mr. J. O. G. Barnes, and
Mr. Chunilal B. Mehta" 10

Cotton Ginning and Pressing Factories Sub-Committee.

4 "That the following members be appointed to form the Cotton Ginning and Pressing Factories Sub-Committee :—

The Vice-President (Sir Purshotamdas Thakurdas),
Sir Joseph A. Kay,
Mr. S. D. Saklatvala,
Mr. J. O. G. Barnes,
Mr. J. Vonesch,
Mr. Chunilal B. Mehta,
Mr. Robert Lee,

RESOLUTIONS—*contd.*

No. Page.

Cotton Ginning and Pressing Factories Sub-Committee—contd.

Mr. W. Roberts,
Mr. J. Tinker,
Mr. Y. G. Deshpande,
Sardar Sampuran Singh,
Co-opted member—Lala Shri Ram " 10

Local Sub-Committee.

5 " That the following members be appointed to compose the Local Sub-Committee :—

Sir Purshotamdas Thakurdas,
Dewan Bahadur Sir T. Vijayaraghavacharya,
Sir Joseph A. Kay,
Mr. S. D. Saklatvala,
Sardar Rao Bahadur Bhimbhai Ranchodji Naik,
Mr. J. Vonesch,
Mr. Girdharlal B. Kotak,
Mr. J. O. G. Barnes,
Mr. Chunilal B. Mehta, and
Mr. C. V. Sane " 11

Agricultural Research Sub-Committee.

6 " That the following members be appointed to form the Agricultural Research Sub-Committee :—

I. *Ex-officio*—Dewan Bahadur Sir T. Vijayaraghavacharya,

II. The *Vice-President* (Sir Purshotamdas Thakurdas),

III. The Director, Institute of Plant Industry, Indore—Mr. F. K. Jackson.

IV. Co-operative representative—Sardar Sampuran Singh,

V. Cotton growers' representative—Mr. W. Roberts,

VI. Cotton Trade representative—Sir Joseph A. Kay,

VII. Four Agricultural Officers—

Mr. T. F. Main,
Mr. F. J. Plymen,
Mr. H. R. Stewart,
Mr. V. Ramanatha Ayyar,

RESOLUTIONS—*contd.*

No. Page.

Agricultural Research Sub-Committee—contd.

VIII. Additional members—
Mr. B. C. Burt,
Dr. L. C. Coleman,
Dr. W. Burns,
Mr. D. N. Mahta,
Rai Saheb Thakur Ram Prasad Singh,
Mr. H. H. Pandya,
Mr. W. J. Jenkins,
Mr. P. B. Richards,
Mr. B. A. Collins,
Mr. S. V. Ramamurty,
Mr. C. V. Sane,
Mr. Chunilal B. Mehta,

IX. Co-opted member—Cotton Research Botanist, Lyallpur, and

X. The Secretary" 11

Technological Research Sub-Committee.

7 "That the following members form the Technological Research Sub-Committee :—
The President (*ex-officio*),
The Vice-President (Sir Purshotamdas Thakurdas), *ex-officio*,
Sir Joseph A. Kay,
Mr. S. D. Saklatvala,
Mr. B. C. Burt,
Mr. H. R. Stewart,
Mr. T. F. Main,
Mr. Chunilal B. Mehta,
Mr. Y. G. Deshpande,
Seth Naranlal Jivanlal,
Mr. S. V. Ramamurty,
Lala Shri Ram, and
Mr. J. Tinker.

The Bombay Millowners' Association, the Ahmedabad Millowners' Association and the East India Cotton Association will be asked to nominate two representatives each" 12

RESOLUTIONS—*contd.*

No.		Page.
	Research Students Selection Sub-Committee.	
8	"That the Research Students Selection Sub-Committee be composed of the following members :— The President, The Vice-President (Sir Purshotamdas Thakurdas), Sir Joseph A. Kay, Mr. S. D. Saklatvala, Mr. B. C. Burt, Dr. W. Burns, Mr. P. B. Richards, Mr. H. R. Stewart, Mr. F. J. Plymen, Mr. S. V. Ramamurty, Dr. L. C. Coleman, Mr. H. H. Pandya, Mr. T. F. Main, Mr. W. J. Jenkins, Mr. F. K. Jackson, Mr. C. V. Sane, and Dr. Nazir Ahmad"	12
	Malpractices Sub-Committee.	
9	"That the Sub-Committee on Malpractices consist of the following members :— The Vice-President (Sir Purshotamdas Thakurdas), Sir Joseph A. Kay, Mr. S. D. Saklatvala, Mr. J. O. G. Barnes, Mr. Chunilal B. Mehta, Mr. T. F. Main, Sardar Rao Bahadur Bhimbhai Ranchodji Naik, Mr. J. Venesch, with power to co-opt"	13
	Central Provinces Cotton Market Act.	
10	"The Indian Central Cotton Committee thanks the Government of the Central Provinces for agreeing to give the Committee an opportunity of expressing its views on the draft rules proposed to be framed under the Central Provinces Cotton Market Act before placing them before the local Council"	13

RESOLUTIONS—*contd.*

No.		Page.
	Universal Standards for Indian Cottons.	
11	"That steps be taken to introduce Universal Standards for Indian cottons for use in India itself and the Local Sub-Committee be instructed to prepare a scheme for the purpose in conjunction with the various trade associations"	14
	Proposed compilation and publication of Cotton Forecasts by the Committee.	
12	"That the Indian Central Cotton Committee appoints a Cotton Forecast Improvement Committee to meet as soon as possible after the publication of the Final Cotton Forecast* and to prepare a report on the degree of accuracy of the all-India Cotton Forecasts with recommendations for its improvement in future" ..	14
13	"That the personnel of the Forecast Improvement Committee as mentioned in the Secretary's Memorandum be approved"	14
14	"That the Central Cotton Committee invites proposals from the Agricultural Departments of the cotton growing provinces and States for a study of the village consumption of cotton in India and these proposals be considered at the next meeting of the Committee" ..	14
15	"That the Karachi Joint Cotton Committee be invited to consider the possibility of securing an annual census of cotton stocks as in Bombay, and a similar representation be made to trade bodies in Madras, Calcutta, Tuticorin and other important places" ..	15
	Half-yearly report of the Publicity and Propaganda Officer.	
16	"That the Report of the Publicity and Propaganda Officer be approved"	29
	Proposal for the formation of a Cotton Association at Karachi.	
17	"That the Indian Central Cotton Committee notes with satisfaction the strides that have been made with regard to the organisation of the cotton market in Karachi as is evident from the report of the Karachi Joint Cotton Committee for the period 1927–32. This Committee feels that the affairs of the Karachi Joint Cotton Committee have reached a stage at which its conversion into a separate Cotton Association seems very desirable"	15

*At present called the Supplementary General Memorandum on the Cotton Crop and published in April.

RESOLUTIONS—*contd.*

No.		Page.
	Appointment of a permanent representative of the Karachi Indian Merchants' Association on the Committee.	
18	"That the Indian Central Cotton Committee recommends to the Governor-General in Council to bestow on the Karachi Indian Merchants' Association the right to send one permanent representative on this Committee instead of the present nominated additional member"	15
	New Punjab Seed Distribution and Extension Scheme.	
19	"That the scheme now submitted by the Director of Agriculture, Punjab, be withdrawn and a revised scheme be submitted for consideration at the next meeting of the Committee"	27
	Utilisation of savings for the grant of bonus to growers of Verum cotton.	
20	"That the Director of Agriculture, Central Provinces, be asked to submit the scheme in a different form" ..	36
	Report of the Agricultural Research Sub-Committee.	
21	"That the Report of the Agricultural Research Sub-Committee be adopted"	27
	Progress Report of the Director, Technological Laboratory.	
22	"That the Progress Report of the Director, Technological Laboratory, be adopted"	27
	Report of the Technological Research Sub-Committee.	
23	"That the Report of the Technological Research Sub-Committee be adopted"	27
	Report of the Special Sub-Committee on the status of Committee servants.	
24	"The Indian Central Cotton Committee regrets to find that the procedure laid down in Government of India's letter No. 1858-Agri., dated the 5th December 1931, referred to in the Committee's resolution No. 22, dated 15th December 1931, has failed to achieve its object. On the contrary, it has led to results which were contemplated neither by the Committee nor by Government. These results which are summarised in	

RESOLUTIONS—*concld.*

No. Page.

Report of the Special Sub-Committee on the status of Committee servants—contd.

the Memorandum attached involve the impairment of the Committee's statutory control over the application of the Cotton Cess Fund, its ability to guide and direct the research work which it finances, its control over the scientific research staff which has been built up in the last nine years, and its ability to secure qualified research workers in the future. The Committee is impelled to request the Government of India to reconsider the decision contained in their letter quoted above as the objects for which the Committee was constituted by the Legislature are likely to be defeated" 28

Report of the Research Students Selection Sub-Committee.

25 "That the Report of the Research Students Selection Sub-Committee be adopted" 28

Report of the Standing Finance Sub-Committee.

26 "That the Report of the Standing Finance Sub-Committee be adopted."

"That the Revised Estimates for 1932–33 be approved."

"That the Budget for 1933–34, as now amended, be sanctioned" 29

27 "That the Indian Central Cotton Committee expresses its great appreciation and conveys its thanks to the Karachi Chamber of Commerce for the kind way in which they have provided the Committee with all the facilities for holding its meeting at Karachi" .. 36

APPENDIX I.

SUBJECT 3.—*Retirement of members by rotation.*

Secretary's Note.

Under Rule 3 of the Rules made under Section 15 of the Indian Cotton Cess Act, the following members of the Committee retire on completion of their three-year term of membership:—

1.	Representative of the Madras Agricultural Department.	Mr. S. V. Ramamurty (vice Mr. D. G. Munro).
2.	Representative of the Bombay Agricultural Department.	The Director of Agriculture, Bombay Presidency.
3.	Representative of the East India Cotton Association.	Sir Purshotamdas Thakurdas (vice Mr. W. Ellis Jones).
4.	Representative of the Bombay Millowners' Association.	Mr. S. D. Saklatvala.
5.	Representative of the Empire Cotton Growing Corporation.	Mr. W. Roberts.
6.	Representative of the cotton manufacturing or cotton ginning industry in the Central Provinces.	Rao Bahadur G. R. Kothare (vice late Rao Bahadur K. J. Deshmukh).
7.	Co-operative representative ..	Sardar Sampuran Singh.
8.	Representative of the cotton growing industry in the Punjab.	Major D. Vanrenen.
9.	Representative of the cotton growing industry in the Central Provinces and Berar.	Rao Bahadur M. G. Deshpande.
10.	Representative of the cotton growing industry in the Central Provinces and Berar.	Mr. M. P. Kolhe.
11.	Representative of the Hyderabad State.	Mr. B. A. Collins.
12.	Representative of the Gwalior State ..	Mr. H. H. Pandya.
13.	Additional member nominated under Section 4 (*xi*) of the Indian Cotton Cess Act.	Mr. D. N. Mahta.
14.	Additional member nominated under Section 4 (*xi*) of the Indian Cotton Cess Act.	Dr. L. C. Coleman.
15.	Additional member nominated under Section 4 (*xi*) of the Indian Cotton Cess Act.	Rai Saheb Thakur Ram Prasad Singh.

All retiring members are eligible for re-nomination. The necessary notices will be sent to the nominating bodies in February 1933.

APPENDIX II.

SUBJECT 4.—*Appointment of Vice-President and Sub-Committees.*

Secretary's Note.

A. *Vice-President.*—Under Rule 4 (*a*) of the Indian Cotton Cess Rules, the Committee is required to elect a member, for the time being resident in Bombay, to be Vice-President for the twelve months commencing on the 1st April 1933.

B. *Sub-Committees.*—

(1) *Standing Finance Sub-Committee.*—This is a statutory Sub-Committee appointed to hold office for twelve months from April 1st and shall consist of nine members including the President and Vice-President who shall be *ex-officio* members; the Vice-President shall be the *ex-officio* Chairman of the Sub-Committee. According to a resolution passed

at the 5th meeting of the Indian Central Cotton Committee, one member of the Sub-Committee shall be a cotton growers' representative; the present members are :—

Dewan Bahadur Sir T. Vijayaraghavacharya
Sir Joseph A. Kay (*Chairman*) } *ex-officio*,

Sir Purshotamdas Thakurdas,

Mr. S. D. Saklatvala,

Mr. J. Vonesch,

Mr. F. O. G. Barnes,

Rao Bahadur M. G. Deshpande,

Mr. Chunilal B. Mehta, and

Sardar Rao Bahadur Bhimbhai Ranchodji Naik (cotton growers' representative).

Three members of this Sub-Committee, viz., Sir Purshotamdas Thakurdas, Mr. S. D. Saklatvala and Rao Bahadur M. G. Deshpande will retire in March 1933 and if they are now re-elected to the Sub-Committee but are not re-nominated to the Committee in March next, it will be necessary for the Sub-Committee to fill the vacancies at a later date.

(2) *Cotton Ginning and Pressing Factories Sub-Committee.*—This is also a statutory Sub-Committee, appointed by the Committee to hold office for 12 months from April 1st. The constitution of the Sub-Committee and the present members are as follows :—

(*a*) The *Vice-President* (Sir Joseph A. Kay), *ex-officio*.

(*b*) *Five trade members resident in Bombay Presidency.*—Messrs. S. D. Saklatvala, J. Vonesch, Chunilal B. Mehta and Sir Purshotamdas Thakurdas and one seat is vacant caused by the resignation of Mr. D. McCallum.

(*c*) *One trade member from each of the following provinces* :—

Madras ..	.. Vacant (caused by the resignation of Mr. H. B. Moore).
Punjab ..	.. Mr. W. Roberts.
United Provinces	.. Mr. J. Tinker.
Central Provinces	.. Mr. Y. G. Deshpande.

(*d*) *The Co-operative representative.*—Sardar Sampuran Singh (*ex-officio*).

The above two vacancies have not been filled as the Sub-Committee did not meet during the year.

Five trade members resident in Bombay and *four* provincial trade members have to be appointed.

(3) *Local Sub-Committee.*—This Sub-Committee is not a statutory Sub-Committee but is composed of local members or those within easy reach of Bombay. The present members are :—

Dewan Bahadur Sir T. Vijayaraghavacharya (*President*),

Sir Joseph A. Kay (*Vice-President*),

Sir Purshotamdas Thakurdas,

Mr. S. D. Saklatvala,

Mr. J. Vonesch,

Sardar Rao Bahadur Bhimbhai Ranchodji Naik,

Rao Bahadur M. G. Deshpande,

Mr. Chunilal B. Mehta,

Mr. J. O. G. Barnes, and

Mr. C. V. Sane (co-opted).

(4) *Agricultural Research Sub-Committee.*—The constitution of this Sub-Committee was laid down at the 10th meeting of the Indian Central Cotton Committee. The present members are :—

(*i*) President	.. Dewan Bahadur Sir T. Vijayaraghavacharya.
(*ii*) Vice-President ..	.. Sir Joseph A. Kay.

(*iii*) Director, Institute of Plant Industry, Indore.	..	Mr. F. K. Jackson.
(*iv*) Co-operative representative	..	Sardar Sampuran Singh.
(*v*) One cotton growers' representative	..	Mr. W. Roberts.
(*vi*) One cotton trade representative	..	Sir Purshotamdas Thakurdas.
(*vii*) Four Agricultural Officers	..	Mr. T. F. Main. Mr. F. J. Plymen. Mr. H. R. Stewart (co-opted in place of Mr. D. Milne retired). Mr. V. Ramanatha Ayyar.
(*viii*) Additional members	..	Mr. B. C. Burt. Dr. L. C. Coleman. Dr. W. Burns. Mr. D. N. Mahta. Rai Saheb Thakur Ram Prasad Singh. Mr. H. H. Pandya. Mr. W. J. Jenkins. Mr. P. B. Richards. Mr. B. A. Collins. Mr. C. V. Sane.
(*ix*) Co-opted member	..	Successor to the Cotton Research Botanist, Lyallpur.
(*x*) The Secretary.		

In addition to the above, Mr. S. V. Ramamurty and Rai Saheb Kalidas Sawhney have been co-opted for the January 1933 meeting of the Sub-Committee.

Nos. (*i*), (*ii*), (*iii*) and (*iv*) above are members *ex-officio*. Membership under (*v*), (*vi*), (*vii*) and (*viii*) has to be filled.

(5) *Technological Research Sub-Committee.*—The present members of this Sub-Committee are as follows :—

The *President*—Dewan Bahadur Sir T. Vijayaraghavacharya } *ex-officio*,
The *Vice-President*—Sir Joseph A. Kay }

Mr. S. D. Saklatvala,

Mr. B. C. Burt,

Mr. T. F. Main,

Mr. H. R. Stewart (co-opted in place of Mr. D. Milne, retired),

Mr. Chunilal B. Mehta,

Mr. Y. G. Deshpande, and

Seth Naranial Jivanlal.

Co-opted members.

Sir Munmohandas Ramji Mr. F. Stones	}	Representatives of the Bombay Mill-owners' Association.
Seth Kasturbhai Lalbhai Seth Chamanlal G. Parekh	}	Representatives of the Ahmedabad Mill-owners' Association.
Mr. Bhaidas Nanalal Mr. R. G. Saraiya	}	Representatives of the East India Cotton Association, Ltd.

(6) *Research Students' Selection Sub-Committee.*—The composition of this Sub-Committee was laid down at the 5th meeting of the Committee to be all provincial agricultural representatives, the Directors of Agriculture of Indian States, who are members of the Committee, the President and the Vice-President. The present members are :—

The *President*—Dewan Bahadur Sir T. Vijayaraghavacharya,

The *Vice-President*—Sir Joseph A. Kay,

Sir Purshotamdas Thakurdas,

Mr. S. D. Saklatvala,

Mr. B. C. Burt,

Dr. W. Burns,

Mr. P. B. Richards,

Mr. H. R. Stewart (co-opted in place of Mr. D. Milne, retired),

Mr. F. J. Plymen,

Dr. L. C. Coleman,

Mr. H. H. Pandya,

Mr. T. F. Main,

Mr. W. J. Jenkins,

Mr. C. V. Sane,

Mr. F. K. Jackson, and

Dr. Nazir Ahmad.

(7) *Sub-Committee on Malpractices.*—This Sub-Committee was formed at the 19th meeting of the Committee in July 1929 and is composed of the Vice-President and six members of the Committee with powers to co-opt additional members representative of different sections of the cotton industry in India, whether members of the Indian Central Cotton Committee or not. The present members are as follows :—

The Vice-President (Sir Joseph A. Kay),

Mr. S. D. Saklatvala,

Sir Purshotamdas Thakurdas,

Mr. Chunilal B. Mehta,

Mr. T. F. Main, and

Sardar Rao Bahadur Bhimbhai Ranchodji Naik.

There is one vacancy on this Sub-Committee caused by the resignation of Mr. D. McCallum, which will be filled when the Sub-Committee meets next.

APPENDIX III.

SUBJECT 5.—*Cotton Transport Act, Bombay—Inclusion of additional Railway stations in the Nerbudda-Mahi Zone.*

Secretary's Note.

The following Resolution and Notification of the Bombay Government are for information :—

" Cotton Transport Act, Nerbudda-Mahi Zone—Inclusion of certain additional railway stations in.

GOVERNMENT OF BOMBAY.

REVENUE DEPARTMENT.

Resolution No. 535-A.

Bombay Castle, 22nd October 1932.

Memorandum from the Secretary to the Legislative Council, No. 1187, dated the 7th October 1932, forwarding a copy of the following Resolution moved by the Honourable Diwan Bahadur S. T. Kambli and passed by the Legislative Council on 3rd October 1932 :—

" This Council recommends to Government that the following notification proposed to be issued under section 3 of the Cotton Transport Act, 1923 (III of 1923), having been laid in draft before the Council and approved by it in the form set forth below may now be issued in the said form."

RESOLUTION.—The notification should be published in the *Bombay Government Gazette.*

2. Copies of the notification should be forwarded to the Government of India, the Resident at Baroda, and the Political Agent, Rewa Kantha, and other officers concerned for information.

By order of the Government of Bombay
(Transferred Departments),

(Signed) H. V. R. IENGAR,
Under Secretary to Government.

REVENUE DEPARTMENT.

Bombay Castle, 22nd October 1932.

No. 535-A.—In exercise of the powers conferred by sub-section (2) of Section 3 of the Cotton Transport Act, 1923 (III of 1923), the Government of Bombay is pleased to amend Government Notification in the Revenue Department, No. 535-A, dated the 11th May 1931, as follows, namely :—

In Schedule II appended to the said notification the following entries shall be inserted after the entry relating to Broach-Jambusar Railway, namely :—

Broach-Jambusar-Kavi Railway.

Jambusar City.	Kangam.
Kotêshwar.	Kavi.
Tundaj.	Kavi Bunder.
Kora.	Tankari Road.

Samni-Dahej Railway.

Vagra.	Nadavkha.
Vahial.	Sambheti.
Pakhajan.	Dahej.

By order of the Government of Bombay
(Transferred Departments),

(Signed) S. H. COVERNTON,
Acting Secretary to Government."

A copy of Schedule II* of Bombay Government Notification No. 535-A, dated the 11th May 1931, is also attached for ready reference.

APPENDIX IV.

SUBJECT 6.—*Cotton Transport Act—Madras.*

Secretary's Note.

The following note received from the Director of Agriculture, Madras, on the working of the Cotton Transport Act in the Madras Presidency is for information. The question of controlling the transport of cotton by road and river is engaging the attention of the Government, but no move has so far come from the trade for the separation of the Tiruppur and Tinnevelly areas.

" *The Working of the Cotton Transport Act,* 1931-32.

The Cotton Transport Act of 1923 was put into effect in 1925 in the Madras Presidency and has been in force since then. There are now two protected areas, viz. : (1) the Southern tract comprising the 11 districts of Chingleput, South Arcot, Chittoor, North Arcot, Salem, Coimbatore, Trichinopoly, Tanjore, Madura, Ramnad and Tinnevelly, and (2) the Northern and Western tract comprising the four districts of Kurnool, Bellary, Anantapur and Cuddapah. There is, however, no restriction on (1) the import of cotton of any kind by road and river into these districts and (2) the import of cotton seed.

2. The absence of restriction on the movement of cotton by road and river has resulted in the object of the Act being partially defeated, as Cocanadas cotton and

* Not printed.

cotton from the Nizam's Dominions get into the districts of Bellary and Kurnool and as Mysore and Malabar cottons are taken to Tiruppur. It is possible to replace the local inferior cotton in Malabar by superior cotton and steps are being taken to this end. The general question of controlling irregular transport of cotton by road and river is engaging attention.

3. *Northern and Western Tract.*—As in the past, the operation of the Act has partially checked the importation into this tract of Cocanadas cotton.

4. *Southern Tract.*—The import of cotton from the Central Provinces into this tract has been effectively checked.

The Southern tract is extensive and has facilities to grow and exchange all varieties of cotton, both inferior and superior. For example, merchants at Virudhunagar get by railway without restriction the poor variety of Nadam-bourbon *kapas* from the Trichinopoly district and mix it with good Cambodia *kapas* got from the neighbourhood of Dindigul and Ayalur. The amalgamation of the Tiruppur and Tinnevelly areas has tended to reduce considerably the benefits that should have accrued from the working of the Act.

5. In connection with the complaint that Pulichai cotton seed was imported into parts of Ramnad and Tinnevelly for sowing, owing to the absence of restriction on the import of cotton seed, Government passed an Act providing for the prohibition of the cultivation of Pulichai cotton and mixing of such cotton with other cotton and for the prohibition or restriction of the possession or use of, or the trade in Pulichai cotton or cotton mixed with Pulichai cotton in the districts of Madura, Ramnad, Tinnevelly and Coimbatore."

APPENDIX V.

SUBJECT 7.—*Central Provinces Cotton Market Act.*

Secretary's Note.

At its meeting in December 1931, the Indian Central Cotton Committee passed a Resolution approving in principle the Bill introduced by Mr. M. P. Kolhe in the Central Provinces Legislative Council for supplying the Central Provinces with organised cotton markets on the lines of those in Berar. The Bill has since been passed into law and a copy of the Act* as published is attached. Differences between the Act and Bill, other than those of an unimportant or drafting nature, are detailed below :—

1. *Section* 4 (1) *of the Act.*—The words " or by growers of cotton within such areas " are additional.

2. *Section* 6 (2) (*xv*) *of the Act.*—The words " a contract between buyer and seller is to be entered into and " are additional.

3. The following explanation appearing under clause 13 (1) of the Bill has been omitted from the Act. The corresponding section of the Act is 12 (1).

" *Explanation.*—Every deduction other than deductions on account of deviation from sample, when the purchase is made by sample, or of deviation from standard, when the purchase is made by reference to a known standard, or on account of difference between the actual weight of the sacking and the standard weight or on account of the admixture of foreign matter, shall be regarded as a trade allowance for the purposes of this Act."

4. The following words at the commencement of clause 13 (2) of the Bill are omitted from the corresponding section [viz., section 12 (2)] of the Act :—

" No purchaser of cotton shall be allowed to make any deductions from the agreed price of the consignment except for damage including excessive moisture."

5. *Section* 13 *of the Act.*—The proviso is an addition.

6. *Section* 14 *of the Act.*—This is new.

The Local Government is taking steps to issue rules under section 6 of the Act and have agreed to give the Committee an opportunity of expressing its views before the draft rules are placed before the local Council.

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* Not printed.

APPENDIX VI.

SUBJECT 8.—*Madras Cotton Control Act—Notifications and Rules.*

Secretary's Note.

At its last meeting, the Central Cotton Committee considered the Madras Cotton Control Act as passed by the Madras Legislative Council and passed the following resolution :—

"The Indian Central Cotton Committee thanks the Madras Government for the opportunity afforded to it of expressing its views on the Madras Cotton Control Bill and for giving effect to its recommendations by incorporating the necessary amendments in the Bill."

The Act has since come into force. The Notifications and Rules issued under the Act are attached for the information of members.

Notifications and Rules under the Madras Cotton Control Act.

GOVERNMENT OF MADRAS.

DEVELOPMENT DEPARTMENT.

G. O. No. 939, 12th July 1932.

NOTIFICATIONS.

I.

In exercise of the powers conferred by section 3 of the Madras Cotton Control Act, 1932 (Madras Act VII of 1932), the Governor acting with Ministers is hereby pleased to prohibit in the districts of Madura, Ramnad, Tinnevelly and Coimbatore, for a period of three years—

(*a*) the cultivation of Pulichai cotton ;

(*b*) the mixing of Pulichai cotton with any other kind of cotton ; and

(*c*) the possession or use of, or the trade in Pulichai cotton or cotton mixed with Pulichai cotton.

II.

In exercise of the powers conferred by sub-section (1) of section 5 of the Madras Cotton Control Act, 1932 (Madras Act VII of 1932), the Governor acting with Ministers is hereby pleased to authorise all Deputy Directors of Agriculture and District Agricultural Officers, having jurisdiction over any notified area to exercise the powers specified in that section, within such area.

III.

In exercise of the powers conferred by clause (*b*) of sub-section (2) of section 5 of the Madras Cotton Control Act, 1932 (Madras Act VII of 1932), the Governor acting with Ministers is hereby pleased to authorise the Cotton Specialist, Coimbatore, to receive cotton seized under sub-section (1) of that section for examination and report to the Director of Agriculture, Madras.

IV.

Rules under section 10 (1) *of the Madras Cotton Control Act,* 1932 (*Madras Act VII of* 1932).

In exercise of the powers conferred by sub-section (1) of section 10 of the Madras Cotton Control Act, 1932 (Madras Act VII of 1932), the Governor acting with Ministers is hereby pleased to make the following rules to carry into effect the purposes of the said Act :—

1. The report required to be made under clause (*a*) of sub-section (2) of section 5 of the Act shall be in Form A or Form B annexed to these rules, according as the cotton to which the report relates was seized under clause (*a*) or (*b*) of sub-section (1) of section 5.

2. Every officer seizing any cotton under sub-section (1) of section 5 shall forward to the officer referred to in clause (*b*) of sub-section (2) of that section—

(*a*) if the cotton seized weighs more than ten lbs., a sample of such cotton weighing ten lbs., and

(*b*) if the cotton seized weighs less than ten lbs., all the cotton seized.

FORM A.

Report of the seizure of cotton under clause (*a*) of sub-section (1) of section 5 of the Act.

1. Description of the land in which the Pulichai cotton was cultivated—

(*a*) District.
(*b*) Taluka.
(*c*) Village.
(*d*) (*i*) Survey number, and
(*ii*) Sub-division number, if any.

2. Name of the owner or occupier of the land.

3. Particulars of the cotton seized—

(*a*) Description.
(*b*) Quantity.

4. Any other remarks.

Station — Signature of the Reporting Officer.

Date

FORM B.

Report of the seizure of cotton under clause (*b*) of sub-section (1) of section 5 of the Act.

1. Description of the land, building, vessel or place in which the Pulichai cotton or cotton mixed with Pulichai cotton was kept—

(*a*) District.
(*b*) Taluka.
(*c*) Village.
(*d*) (*i*) Survey number, and
(*ii*) Sub-division number, if any.

2. Name of the owner or occupier of the land, building, vessel or place.

3. Name of the person from whose possession the cotton was seized.

4. Particulars of the cotton seized—

(*a*) Description.
(*b*) Quantity.

5. Any other remarks.

Station — Signature of the Reporting Officer.

Date

APPENDIX VII.

SUBJECT 9.—*Bombay Cotton Contracts Act.*

Secretary's Note.

At its last meeting, the Committee considered the Bombay Cotton Contracts Bill which was referred to it for opinion by the Bombay Government. The Bill has since passed into law and a copy of the Act* is attached. When considering the Bill the Committee expressed its views only on clauses 4, 9 and 10; the corresponding sections of the Act bear the same numbers. Sections 9 and 10 of the Act are practically identical with clauses 9 and 10 of the Bill. Clause 4 of the Bill has, however, been materially altered and a copy of it is appended for ready reference.

As a result of the discussions at the last meeting, the Bombay Government were informed with reference to clause 4 of the Bill that the Committee emphatically re-affirmed the opinion already previously expressed by it, viz., that there should be only one Association controlling the marketing of cotton in Bombay and that this Association should be given statutory powers fully equal to those held by the East India Cotton Association, that Government must continue to exercise control over the marketing of cotton in Bombay as at present and that strong steps should be taken to prevent more than one Association operating. The Committee had no objection to the Government obtaining from the Legislature discretionary power to recognise other associations

* Not printed.

though it trusted that the exercise of this power would in practice be unnecessary and would only be resorted to in the event of the East India Cotton Association ceasing to function normally.

Provision has been made in the Act for the recognition of the East India Cotton Association subject to the provisos contained in sub-section (7) of section 4 of the Act, one of which is that not less than one-fourth of the total number of the Board of Directors shall be growers of cotton. At present the Board of the East India Cotton Association consists of 16 members, two of whom are cotton growers' representatives nominated by the Indian Central Cotton Committee from among its members.

With regard to clauses 9 and 10 of the Bill, the Bombay Government were informed that the Committee was decidedly against the incorporation in the Bill of any provisions such as those contemplated as it considered that Government intervention of the kind would be detrimental to the interests of both cotton growers and the trade, and in any case would fail to secure the objects in view, namely, free trading in the market and the elimination of outside interference.

Copy of clause 4 of the Bombay Cotton Contracts Bill.

Recognition.

4. (1) A cotton association desirous of being recognised for the purposes of this Act shall make an application in writing to the Governor in Council for such recognition, and shall submit bye-laws for the regulation and control of transactions in cotton and furnish such information in regard to such recognition as the Governor in Council may from time to time require.

(2) The Governor in Council may give or refuse such recognition :

Provided that no such recognition shall be given unless the bye-laws submitted by the cotton association under sub-section (1) shall have been published in the *Bombay Government Gazette* at least one month before the date of such recognition.

(3) The Governor in Council may at any time withdraw the recognition given to a cotton association under sub-section (2), and such cotton association shall thereupon cease to be a recognised cotton association.

(4) It is hereby declared that the East India Cotton Association, Limited, is a recognised cotton association for the purposes and subject to the provisions of this Act and the articles and bye-laws of the said Association shall be deemed to be bye-laws made and published under the provisions of this Act.

APPENDIX VIII.

SUBJECT 10.—*Universal standards for Indian cottons—Opinions received.*

Secretary's Note.

The subject of the adoption of universal standards for Indian cottons has been mooted more than once in the past and at its last meeting, the Indian Central Cotton Committee passed the following resolution :—

" That a copy of the previous discussion on this subject be circulated to all commercial and agricultural bodies interested in cotton and to the Government of India and that the matter should be brought up at the next meeting of the Committee for further discussion and final decision."

Accordingly copies of this resolution and the previous discussion on this subject were sent to 50 commercial bodies throughout India, to fifteen Provincial Directors of Agriculture including the Directors of Agriculture, Hyderabad, Mysore, Baroda, Gwalior and Holkar States, to the Government of India and to the Imperial Council of Agricultural Research.

A. *Commercial Bodies.*

Replies from 24 commercial bodies have so far been received and they are summarised below :—

1. *Chamber of Commerce, Bombay*—

(*a*) Feel that it would be preferable to aim in the first place at the establishment of uniform standards in India itself and when this has been accomplished, the larger question of adopting universal standards might be considered.

(*b*) Consider that the establishment of uniform standards in India should be arranged by private negotiation as was done in the case of Punjab-American and Sind cottons between the Karachi Joint Cotton Committee and the East India Cotton

Association, and that legislation should only be undertaken to give effect to the agreement so reached.

2. *Indian Merchants' Chamber, Bombay—*

(*a*) Agree to the adoption of universal standards for Indian cottons and suggest that their preparation should be entrusted to a body representative of growers, merchants, and others concerned in the trade.

(*b*) Expect that the Imperial Council of Agricultural Research will be able to place helpful materials and suggestions when details are worked out.

3. *Millowners' Association, Bombay.*—Are in favour of the adoption of universal standards for all Indian cottons. Suggest that it would be desirable to convene a Conference of all interests in the trade in order to discuss the measures to be taken to expedite the adoption of universal standards for Indian cottons on the lines of those for American cotton as laid down in the United States of America Cotton Standards Act and that arrangements for the proposed conference might be taken in hand in consultation with the various trade interests concerned.

4. *East India Cotton Association, Bombay—*

(*a*) Welcome the proposal for the evolution of uniform and universal standards for Indian cottons, which would be beneficial to the cotton trade interests as a whole as well as to the cotton grower.

(*b*) Would be glad to co-operate with the Committee in the promulgation of any constructive scheme that may be decided upon.

(*c*) Consider that it would be advisable to proceed with the utmost caution in this matter in view of the experience of the various stages through which the scheme of Universal Standards for American cotton had to pass.

(*d*) Are of definite opinion that a beginning might as well be made now in the direction of unification of standards for Indian cottons.

(*e*) Are also of opinion that the work of preparation of these standards, if and when any scheme has been agreed upon, should be done in Bombay.

5. *Marwadi Chamber of Commerce, Ltd., Bombay—*

(*a*) Are of opinion that the adoption of common standards for Indian cottons in India should be welcomed first with the ultimate object of achieving universal standards.

(*b*) Feel that care must be taken to see that in fixing such standards the trade is not unnecessarily handicapped or inconvenienced in any way. Trade should be given sufficient opportunity to express their views when details of any scheme are being discussed and formulated.

6. *Millowners' Association, Ahmedabad.*—Feel that the question of the adoption of universal standards is necessary though complicated. Consider it essential to proceed slowly and with caution. Suggest that opinions of all interests concerned should be obtained and considered.

7. *Chamber of Commerce, Karachi.*—Are of opinion that all efforts should first be concentrated on the introduction of universal standards of Indian cotton in India itself before the question of the adoption of universal standards all over the world is taken up.

8. *Buyers' and Shippers' Chamber, Karachi—*

(*a*) Are fully alive to the immediate necessity of adopting universal standards for Indian cottons but are of opinion that there is a greater need of adopting uniform standards in Indian markets first.

(*b*) Suggest that when uniform standards have been adopted and work satisfactorily, a Sub-Committee of experts be formed to collect information from foreign countries, so that when time is ripe for introducing universal standards, the requirements of other countries may have been duly considered.

9. *Joint Cotton Committee, Karachi—*

(*a*) Consider that the immediate objective of all concerned should be the introduction of common standards in the principal markets of India—particularly Bombay and Karachi—before the bigger question of universal standards is attempted.

(*b*) Are of opinion that in matters of trade it would be highly undesirable to invoke Government interference in any shape or form and that uniformity of standards must be based on the willingness of all trade centres concerned.

(*c*) Feel that even if a central organisation is to be set up, it would have to include for the time being a predominant number of representatives of the territory concerned and that this organisation will prepare standards not at one central place but at the respective centres concerned.

10. *Indian Merchants' Association, Karachi.*—Agree with the views of the Joint Cotton Committee, Karachi (*vide* item 9).

11. *Factory-owners' Association, Central Provinces and Berar, Khamgaon.*—Prominent members of the Association unanimously support the proposal that universal standards for Indian cottons should be adopted with Government aid without the least possible delay.

12. *Upper India Chamber of Commerce, Cawnpore.*—Favour the adoption of universal standards for Indian cottons.

13. *Chamber of Commerce, Madras.*—Fully agree with the desirability of steps being taken towards the adoption of universal standards.

14. *Southern India Chamber of Commerce, Madras*—

(*a*) Fully agree that the observance of uniform standards for Indian cotton would increase the marketability of Indian cotton in India and abroad as has been the experience in the case of American cotton, and therefore it would be advisable to urge the Government of India to make the necessary legislation for the purpose.

(*b*) Suggest that the fixing of standards should be done under the auspices of the Indian Central Cotton Committee and the Imperial Council of Agricultural Research by an expert Committee appointed by Government to represent all interests concerned; standards to be fixed after consultation with foreign and Indian bodies concerned, the samples being tested and maintained at the Technological Laboratory, Matunga.

15. *Godavari Chamber of Commerce, Cocanada*—

(*a*) Are of opinion that any suggestions on this question can be offered by technical experts and merchants actually interested in the cotton trade.

(*b*) Are convinced that the question is beset with difficulties and final conclusions can be arrived at only after consultation with the growers, merchants, etc., and effect to be given to them with the co-operation of Local Governments and the Imperial Council of Agricultural Research.

(*c*) Consider that proper steps have to be taken to get the standards recognised in India, simultaneously with their acceptance in foreign markets and hope that the success of this measure will lead to the beginning of a wider introduction of universal standards for Indian cottons all the world over.

16. *Chamber of Commerce, Tuticorin.*—Consider that it would be almost impossible to make up standards which would exactly satisfy particular buyers as different growths vary very much in character, colour, etc. Are of opinion that the present aim should be to get the larger growths, such as Oomras, Bengals, Sind, Punjab-American under one system so that a given standard is exactly the same in different markets.

17. *Punjab Trades Association, Lahore.*—Support the adoption of fixed standards for Indian cottons.

18. *Indian Chamber of Commerce, Lahore.*—Are in favour of the adoption of universal standards for Indian cottons.

19. *Punjab Chamber of Commerce, Delhi*—

(*a*) Strongly support the suggestion for the establishment of universal standards for Indian cottons.

(*b*) Trust that in the Board that will ultimately be set up, all interests connected with cotton will find adequate representation.

20. *Burma Chamber of Commerce.*—Are of opinion that Burma's cotton crop is so small that the question of fixing a world's standard type hardly arises.

21. *Indian Chamber of Commerce, Calcutta.*—Are in full agreement with the proposal for the adoption of universal standards for Indian cottons.

22. *Bengal Chamber of Commerce, Calcutta.*—Explain that the Chamber have no special knowledge of the subject and they therefore, as a body, refrain from expressing any opinion.

23. *Bihar and Orissa Chamber of Commerce.*—State that there is a crying need for universal standards for Indian cottons which should be prepared in a conference of all parties concerned with the help of the Imperial Council of Agricultural Research.

24. *Gwalior Chamber of Commerce.*—Think that the adoption of universal standards for Indian cottons is badly needed in the business world and fully associate with the move in this direction, but are not without suspicion regarding its practicability for some time to come, as well as its benefits to the producers in the existing economical, social and political conditions.

B. *Agricultural Bodies.*

1. *Bombay.*—The Divisional Boards of Agriculture and Agricultural Officers agree that it is desirable to fix universal standards for Indian cottons and that the work of fixing such standards should be the joint work of the trade and of the Department of Agriculture. The Director of Agriculture concurs with the above views.

2. *Central Provinces Provincial Cotton Committee and Agricultural Officers.*—Replies received indicate that members of the Provincial Cotton Committee and cotton growers are in favour of the proposal. Sir Sorabjee B. Mehta strongly supports the proposal that Government should be asked to pass legislation to enforce these standards in India and abroad.

3. *Madras Provincial and Local Cotton Committees and selected cotton growers.*—Are in favour of the adoption of standards for Indian cottons but some of them are of opinion that the adoption of universal standards for all the cottons grown in India embracing different varieties is beset with difficulties and therefore recommend the preparation of Provincial Standards to begin with and that legislation is necessary to enforce the use of standards. The Director of Agriculture, Madras, agrees with the above.

4. *United Provinces.*—The Director of Agriculture is of opinion that the universal standards for Indian cottons are necessary and will be of general advantage.

5. *Bengal Cotton Sub-Committee.*—Replies received from some members indicate that they are in favour of the adoption of universal standards, but some of them are of opinion that there should be common standards for Indian cottons in India first and this should be the beginning of a wider introduction of a universal standard at an early date all over the world.

6. *Punjab Provincial Cotton Committee*—

(*a*) Heartily agree to the desirability of having universal standards but recommend that to start with, efforts be confined, if necessary, to introducing standards for all-India, this sphere to be extended as opportunity arises.

(*b*) Also recommend that the Indian Central Cotton Committee should take the work in hand, the first step being the formation of a Special Committee including growers, traders, representatives of the Government of India and of Local Governments to decide on the standards required, to draw up specifications and finally to make the standards.

7. *Burma.*—The Director of Agriculture suggests the appointment of a Committee to prepare an experimental set of standards. The Department of Agriculture is in favour of the proposal to adopt universal standards for Indian cottons the preparation of which should be settled by the trade, the growers and Government.

8. *Bihar and Orissa.*—The Director of Agriculture is of opinion that the first step towards the adoption of universal standards is the fixation of common standards for dealing in Indian cotton and considers that the Imperial Council of Agricultural Research is best qualified to undertake this work.

APPENDIX IX.

SUBJECT H.—*Scheme for an enquiry into the cost of production of crops in the principal cotton and sugarcane tracts of India—Replies from members.*

Secretary's Note.

The following resolution was passed by the Indian Central Cotton Committee at its meeting held in July 1931 :—

"In view of the difficulty of carrying out an investigation into the cost of production of a single crop, and the fact that this Committee deals only with cotton, the Central Cotton Committee requests the Imperial Council of Agricultural Research to undertake an investigation into the cost of production of the principal crops in the different provinces and States of India."

The question was further discussed by the full Committee at its meeting in December 1931 when it was decided that the Indian Central Cotton Committee should co-operate with the Imperial Council of Agricultural Research in an enquiry into the cost of production of cotton, sugarcane and their rotation crops. It was also decided that a sum amounting to Rs. 10,000 should be provided in the Committee's Budget for 1932–33 for the initial expenses of an investigation into the cost of production of cotton and rotation crops and that the question of appointing a small Sub-Committee to discuss the

details with the Imperial Council of Agricultural Research should be left to the Standing Finance Sub-Committee. This Sub-Committee was constituted later.

The Joint Sub-Committee consisting of the representatives of the Indian Central Cotton Committee and the Imperial Council of Agricultural Research met at Simla on the 15th, 16th and 17th August last and discussed the details of the scheme of enquiry and recommended that the Imperial Council of Agricultural Research and the Indian Central Cotton Committee should share the cost of the scheme, amounting to nearly Rs. 4,25,000 on a 50 : 50 basis.

The recommendation of the Joint Sub-Committee was considered by the Standing Finance Sub-Committee at its meeting held on the 9th September 1932. The Standing Finance Sub-Committee was in favour of contributing half the cost of the scheme, but since the amount involved very appreciably exceeded what the Committee had provisionally sanctioned, it was decided to obtain the views of members of the Committee by circulation and to discuss the subject again at this meeting of the Committee in case there was any material difference of opinion among the members. Copies of the replies* received so far from members are attached and a summary of these is given below.

The following seventeen members agree to the recommendation of the Standing Finance Sub-Committee to contribute half the cost of this scheme :—

Mr. S. D. Saklatvala,

Dewan Bahadur Sir T. Vijayaraghavacharya,

Mr. S. V. Ramamurty,

Dr. W. McRae (the Officiating Agricultural Expert to the Imperial Council of Agricultural Research),

Mr. Chunilal B. Mehta,

Mr. C. V. Sane,

Lala Shri Ram,

Sardar Rao Bahadur B. R. Naik,

Mr. D. Milne,

Khan Bahadur Sardar Habibullah,

Rao Bahadur C. S. Shirahatti,

Mr. Robert Lee,

Mr. Ghulam Mohammad Khan,

Mr. C. R. Palairet,

Mr. F. K. Jackson,

Mr. D. N. Mahta, and

Sir Purshotamdas Thakurdas.

Summary of other replies.

Mr. J. O. G. Barnes.

Feels that he is not in a position to give an opinion on the subject as having only recently been appointed a member is not *au fait* with the state of finances of the Committee.

Rai Sahib Th. Rama Prasada Singh.

(*a*) Would like to have worked out first the probable lines along which relief would be afforded in extraordinary times to the cotton growers if the actual cost of production of cotton was found out.

(*b*) Thinks that the cost of production of crops should have been a matter for the Directors of Agriculture in their respective provinces to investigate and to discuss in a joint meeting with all the other Directors.

(*c*) Opposes the scheme on its prohibitive cost.

(*d*) Favours the subject being fully discussed by the Committee.

Mr. T. F. Main.

(*a*) Points out that the scheme prepared by the Joint Sub-Committee is incomplete as the difficult question of "forms and instructions" has not been disposed of. If they are made too simple the data collected may be inadequate and if they are made too complicated, the staff may not be able to use them.

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* Not printed.

(*b*) Is not satisfied about the question of responsibility for the scheme. Is opposed to the suggestion that this duty should be put upon an existing provincial officer in addition to his current duties.

(*c*) States that the all-important question of "how to put money value on peasant labour" has not been dealt with.

(*d*) Is of opinion that as the scheme cannot be launched before April 1933 in most provinces, the subject should be discussed by the full Committee.

Rao Bahadur G. R. Kothare.

Thinks that the cost of the enquiry is a prohibitive one and that the Committee need not undertake to share half the cost.

Mr. M. P. Kolhe.

(*a*) States that the Committee agreed to undertake this investigation on the understanding that such a huge sum of money would not be involved. Is of opinion that in accordance with his usual experience even the present cost would be exceeded.

(*b*) Considers that in view of present economic conditions the results obtained would not be the average but exceptional in so far as the labour, price of bullocks, cost of seed, implements, manure, rate of interest, etc., are concerned.

(*c*) Thinks that the joint enquiry would not cost less than an independent enquiry by the Committee.

(*d*) Favours the subject being discussed by the full Committee.

Mr. H. H. Pandya.

(*a*) Thinks that the experimental and demonstration farms in the various provinces could give the correct figures of the cost of production of cotton and sugarcane and that if these figures were available there would be no need to spend the amount of Rs. 4,25,000 proposed. In any case considers that these figures should be compared with those obtained from the enquiry.

(*b*) Is of opinion that the major portion of the burden of expenses should be borne by the Imperial Council of Agricultural Research.

(*c*) Suggests that one district of Gwalior State (Ujjain or Shajapur) should also be included in this scheme.

(*d*) Also suggests that as far as the salary of the Officer-in-charge of the scheme is concerned uniformity should be observed whether the service be under the Imperial Council of Agricultural Research or under the Indian Central Cotton Committee. Considers that the pay of the Economist should be on the same scale as that of the Publicity Officer of the Committee.

Mr. V. Ramanatha Ayyar.

Thinks that the apportionment of the expenditure between the Council and the Committee on a 50 : 50 basis is too high for the latter in view of the fact that the costings of all crops grown in rotation with cotton have to be worked out. Suggests that a 2 : 1 basis would be more equitable. Agrees with the other conclusions arrived at.

Mr. F. J. Plymen.

(*a*) Thinks that as the scheme stands, cotton will scarcely receive that amount of consideration which its importance warrants. Considers that the enquiry should be carried out in three districts of the Central Provinces and Berar instead of in only two as provisionally proposed. Desires also a fourth district to be included.

(*b*) Makes certain suggestions regarding the proportionate distribution of the cost of the enquiry between the Council and the Committee and considers that the Committee is being called upon to pay more than its fair share.

(*c*) Thinks that as the investigation would not start in the Central Provinces until April 1933, the subject may be further considered by the full Committee.

Dr. D. B. Meek.

(*a*) Suggests that, in order to increase the practical usefulness of the enquiry, a few more districts should be included in the study, particularly important cotton growing tracts like Hyderabad.

(*b*) Information as to what the cultivator obtains from the disposal of his produce should be included and village consumption should also be ascertained.

(*c*) Considers that adequate provision should be made to ensure that the primary data collected are thoroughly verified and tested by other independent means and that this object could probably be attained by working in close co-operation with the staffs of the Provincial Settlement and Co-operative Departments.

Mr. W. J. Jenkins.

Is unable to agree to the proposal that the Committee should pay half the cost of the scheme until the scheme has been thoroughly discussed by the full Committee.

Seth Naranlal Jivanlal.

Thinks that in these times the Committee cannot afford to spend such a large sum which can be utilised in improving the quality of cotton. Considers that as Government have undertaken an enquiry into the cost of growing sugarcane, they can side by side investigate into the cost of growing cotton without any material increase in expenditure.

The Honourable Mr. V. C. Vellingiri Gounder.

Suggests that as the Committee deals only with cotton and as there are many other crops grown in rotation with sugarcane, the cost of growing which has to be worked out, the Council should bear a greater proportion of the expenditure.

Mr. W. Roberts.

(*a*) Expresses doubt as to whether the Imperial Council will be provided with funds to enable it to undertake half the proposed expenditure, in which case the Committee will be forced to carry on single-handed.

(*b*) Thinks that the procedure now followed of getting individual and separate opinions of members may prove a very undesirable precedent.

(*c*) Is in full sympathy with the object of the enquiry and subject to his being satisfied on one or two matters will vote for the grant in the full Committee.

Sir Joseph A. Kay.

Suggests that the subject be discussed by the full Committee.

Mr. J. Vonesch.

Feels that the cost of the enquiry might be out of proportion to the results gained thereby. Would like to hear all arguments on both sides before coming to a definite decision.

Rao Bahadur M. G. Deshpande.

Agrees to half the cost being borne by the Committee provided it is sanctioned by the full Committee.

Dr. W. Burns.

Concurs with Mr. T. F. Main's views.

Mr. B. A. Collins.

Personally not very keen on these enquiries but has no objection if other members favour them.

APPENDIX X.

SUBJECT 12.—*Cotton Statistics—Draft Memorandum on the compilation and publication of All-India Cotton Forecasts by the Committee.*

In accordance with the decision of the 25th meeting of the Indian Central Cotton Committee on this subject, the attached draft memorandum prepared by the Local Sub-Committee is submitted for the Indian Central Cotton Committee's approval.

Mr. Chunilal B. Mehta does not agree with paragraphs 3, 11, 12 and 13 of the draft and suggests their deletion. In their place he would have the enclosed paragraphs.

DRAFT MEMORANDUM ON THE PROPOSED COMPILATION AND PUBLICATION OF COTTON FORECASTS BY THE INDIAN CENTRAL COTTON COMMITTEE.

(*For submission to the Government of India.*)

At its 23rd meeting held in July 1931, the Indian Central Cotton Committee passed a resolution requesting the Government of India to implement the recommendation of the Indian Cotton Committee (1919) that the Indian Central Cotton Committee might compile and publish the All-India Cotton Forecasts. In reply the Government of India informed the Committee in their letter No. 20-Agri., dated the 6th January 1932, that they were unable to accept the proposal. This reply was considered by the Indian Central Cotton Committee at its 25th meeting held in August 1932.

2. The Committee was not satisfied with the rejection of the proposal by the Government of India, based evidently on purely theoretical grounds, while the intimate knowledge and experience of many members of the existing arrangements for the compilation and publication of forecasts and of the practical results obtained therefrom precluded them from being convinced of the arguments put forward by the Governmen tof India against the proposal. It was therefore decided that the Committee's point of view should be very clearly presented to the Government of India in the form of a memorandum. Reference is invited to the attached discussion* on the subject at the meeting.

3. The Central Cotton Committee thinks it necessary to remove, at the very outset, any misapprehension that its resolution might have created in the minds of the Government. The resolution merely asked for the transfer of the work of compilation and publication of the All-India Forecasts to the Committee without giving any indication of the manner in which the Committee proposed to give effect to the scheme. This failure on the part of the Committee to present the proposal in a more complete form seems to have prejudiced the Committee's case in the eyes of the Government of India. The Committee, therefore, desires to point out that its proposal was meant only as an offer of close co-operation and active participation in the efforts of Government to improve the accuracy of cotton forecasts.

4. The compilation of the All-India Forecasts from the Provincial and the State forecasts is purely a matter of arithmetic, and, as such, it is obvious that the Committee's intention was not merely the improvement of the arithmetical accuracy of the All-India Forecasts. What the Committee aims at is improvement in the accuracy of the estimates of area and yield as reported by the Provinces and States. One way of effecting such improvements is to compare forecast estimates with "actuals" ascertainable at the end of the season for the purpose of detecting possible sources of error in the forecasts and remedying them in the future forecasts. The Committee in 1926 inaugurated such a system of comparison of cotton forecasts with press returns, and the results so far achieved are encouraging. By these comparisons several errors such as incorrect estimates of area in Sind, the Ahmedabad District and the East Deccan, the omission of several Indian States and a large area in the Ferozepore district, and under-estimation of yield in many areas have been detected by the Provincial authorities responsible for the compilation of forecasts, and steps have been taken to remedy them.

5. As Government are aware, press returns are not the only statistics which Government have introduced at the instance of the Indian Central Cotton Committee and which can be usefully employed in the investigations into the inaccuracies in forecasts. The statistics relating to

(1) the actual quantity of Indian raw cotton consumed in mills in British India, compiled from cotton cess returns and similar statistics for mills in Indian States compiled from voluntary returns,

(2) the receipts of loose cotton received in mills in the major cotton growing provinces compiled from voluntary returns, and

(3) the rail and river-borne trade statistics for the internal trade in raw cotton,

are all now available to the forecast authorities. With the help of these statistics it should be possible to calculate, at the end of each season, the "actual" crop for each unit area more accurately than it has hitherto been possible.

6. The determination of the "actual" crop of the season as accurately as possible soon after the season is over is the first stage in the improvement of the accuracy of forecasts. Such determination, however well it may be carried out for their respective territories by the Provincial authorities responsible for the compilation of forecasts, will still require supervision by a central authority well informed on all matters relating to the Indian cotton industry. This is necessary as the problems confronting efforts to improve the accuracy of forecasts are not those of mere arithmetic, but those which only an intimate and expert knowledge of the industry and its phases of development could suggest solutions. It is only under the supervision of such a central authority that the individual efforts of the provinces and States could be co-ordinated and directed.

7. The Indian Central Cotton Committee was, therefore, convinced, when passing the resolution in July 1931, that the time had come when all the interests concerned should make a united effort to remove the stigma of unreliability attached to the Indian cotton forecasts and put them on a sound basis. In a commodity like cotton there is no more potent factor in checking undue speculation than an adequate supply of accurate information available to all. In the interests of the grower, the trader, and the spinner, as well as in the interests of Government for ascertaining the real economic condition of the cotton industry, the importance of obtaining and publishing accurate information

* Not printed.

on the cotton crop of India cannot be over-emphasised. No apology is, therefore, needed for the great concern the Committee has evinced in this matter.

8. The Committee does not consider that the difficulties in the way of improvement of the accuracy of the forecasts enumerated by Government in paragraph 2 of their letter are insuperable, provided the problem is tackled in right earnestness backed by the necessary funds which the Committee could afford to spend. In any case the problem is of such importance as it cannot be left indefinitely unsolved, and the sooner it is solved, the better it is for the country as a whole. The refusal by the Government to comply with the request of the Committee seems, as could be seen from Dr. Meek's remarks at the 25th meeting of the Committee, to have been based on a misapprehension of the role of the Committee and of its Secretary in the actual compilation of the All-India Forecasts. The Committee never intended that the forecasts should be prepared by its entire body or by the Secretary himself. The Committee's intention was to entrust this matter entirely to the care of the Forecasts Sub-Committee, referred to in paragraph 10, a more competent body than which cannot be easily secured to undertake any work of this kind.

9. There is no organisation in India more suitable and better qualified than the Indian Central Cotton Committee to make a determined and concerted effort in all the important cotton growing Provinces and States for the improvement of their respective forecasts. There is also no other organisation in India which commands the confidence of all interests concerning cotton and obtains their co-operation better than the Committee; and finally there is also no other place better suited than Bombay for compilation and publication of All-India Forecasts.

10. The Committee proposes the formation of a Forecasts Sub-Committee consisting of the following members, who are also the authorities responsible for compilation of cotton forecasts in their respective Provinces and States.

		Percentage of cotton area in India represented.
		Per cent.
1.	The President of the Indian Central Cotton Committee (Chairman).	
2.	The Director-General of Commercial Intelligence and Statistics representing in particular the Central India and Rajputana States	9·4
3.	The Director of Agriculture, Bombay	28·7
4.	Do. Punjab	10·2
5.	Do. Madras	8·9
6.	The Director-General of Commerce and Industry, Hyderabad.	14·2
7.	The Director of Agriculture, Baroda	3·1
		74·5

By the addition to this Sub-Committee of the Director of Land Records, Central Provinces and Berar (19·4 per cent.), and the Director of the United Provinces (3·1 per cent.), by getting them nominated on the Indian Central Cotton Committee under the Cotton Cess Act, this Sub-Committee will have on it just eight members, besides the Chairman, representing 97 per cent. of the cotton area of India.

11. The functions of this Sub-Committee may be summed up as "the improvement of cotton forecasts." No change in the existing arrangements for the compilation and publication of provincial, State and All-India Forecasts is contemplated at present. There are several other problems, including *post-mortem* examinations of forecasts and cotton statistics, in general, necessary for the solution of the main problem, which this Sub-Committee can profitably investigate, and devise ways and means which would ultimately lead to the improvement of the accuracy of forecasts. This Sub-Committee can meet at Bombay as often as required and its recommendations will of course go before the Indian Central Cotton Committee for approval. All specific suggestions so far made for the improvement of forecasts can be dealt with by this Sub-Committee.

12. The Central Cotton Committee has every reason to believe that the labours of such a Sub-Committee will soon bear fruit in the shape of greater accuracy in the forecasts. Its constitution is so designed as to ensure the complete and ungrudging co-operation of all concerned; implementing of its recommendations in the Provinces and States is likewise greatly facilitated by its constitution. It would be desirable to make this Sub-Committee a statutory body like the Standing Finance Sub-Committee.

13. If the proposal for the formation of the Forecasts Sub-Committee is acceptable to the Government of India, the Central Cotton Committee proposes to engage a man to make a comparative study of the different systems of forecasting the cotton crop followed in America, India, and other countries, and to have him attached to the Sub-Committee when it begins to function.

(As suggested by Mr. Chunilal B. Mehta.)

* * * * * *

(5) At present Provincial Governments are responsible for Provincial Forecasts which are released independent of the Department of Statistics. The Provincial authorities do frequently amend the figures supplied by primary reporters. First of all the area under cotton cultivation is not precise. Moreover, any "annawari" estimate during the growing season is beyond the capacity of the village officer who is called upon to do it in absence of sufficient training for such work. The "standard normal outturn" adopted by the various Provinces requires frequent revision and adjustment. The Provincial crop figures are issued in advance and independent of the Department of Statistics. Hence, the Department of Statistics cannot supervise the Provincial figures in the light of other data available to them. Just as the Provincial authority finally adjusts the figure for the Province, the highest crop estimating and issuing authority should be allowed to adjust the figures as far as the statistical science of probability would permit. In short, there should be a single authority to issue necessary instructions to primary reporters and to collect all the data and issue forecasts. The Indian Central Cotton Committee is the proper body to exercise that single authority and to issue instructions to primary reporters. However much the Department of Statistics might be well-informed it is not possible for them to attend to cotton along with other crops to the extent they should do owing to limited staff and funds at their disposal.

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(8) Inspite of such statistics being available at the end of the season no improvement is seen even in the accuracy of Government's revised figures. It is certain that the Department of Statistics would have noted the discrepancy between the various sources of statistics and this ought to have given some food for consideration at least when revision takes place after the season is over. But the Committee is not aware of any steps taken by the Government to revise properly the necessary crop figures even after the season is over. Evidently this is due to insufficient staff and funds at the disposal of the Director of Statistics.

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(11) Referring to paragraph 3 of letter No. 20 of the Government of India, the Committee desires to point out that variation in stocks and extra factory consumption have nothing to do with the forecast made during the growing season. To maintain that it is not possible to compute the actual crop with any degree of accuracy unless these two factors are known, is an abuse of the theory of probability which is the basis in any system of forecasting. It is admitted by the Government that real improvement can only follow an improvement in the primary reports. The Committee desires to point out that until now no steps have been taken to improve the primary reports. The Committee has the necessary ability and funds to improve the primary reports with the aid of experts if necessary and it is quite willing and enthusiastic to take up this work of forecasting. In any event the Government of India will be amply benefited by transferring this work to the Central Cotton Committee.

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(13) The Central Cotton Committee also proposes to engage a man to make a comparative study of the different systems of forecasting the cotton crop followed in America, India and other countries, and to have him attached to the Sub-Committee.

(14) The function of this Sub-Committee will be to attend to everything in the matter of improving cotton forecasts. It will issue instructions to primary reporters and Provincial Governments; it will collect all the necessary data for verification and amplification and it will release the crop reports for all-India including provinces at the same time.

(15) It would be desirable to make this Sub-Committee a statutory body like the Standing Finance Sub-Committee. Its constitution is so designed as to ensure the complete and ungrudging co-operation of all concerned. The Central Cotton Committee has every reason to believe that the labours of such a Sub-Committee will soon bear fruit in the shape of greater accuracy in the forecasts.

APPENDIX XI.

SUBJECT 13.—*Cotton Statistics—Comparison of Cotton Press Returns with Cotton Forecasts.*

Secretary's Note.

Statements (Enclosures 1, 2 and 3) showing the comparison between the forecasted crop and the cotton accounted for by cotton press returns and raw cotton trade statistics during the season 1931-32 are attached. Information as far as available has been incorporated in them and these may now be referred to the authorities responsible for the preparation of cotton forecasts for investigating the apparent discrepancies between the different sets of figures brought out in these statements, which are only meant as the frame-work for the authorities to work upon.

It is noticed that for the seventh year in succession Sind shows an excess of cotton pressed over the forecasted crop. In the case of the Punjab the February estimate of 514,000 bales has been raised to 618,000 bales in the April estimate. This has brought the forecast figure closer to the crop indicated by press returns and trade statistics. Bengal and Mysore also show large excesses over forecasted crops. The indicated production in Hyderabad is much below the forecasted crop.

On the whole the analysis shows that there is a greater agreement between the forecasts, press returns and trade statistics than is usually the case.

At its 24th meeting held in December 1931 the Committee had under consideration a similar analysis of the statistics for the season 1930–31, and referred it to the authorities concerned for further examination. At the same meeting an exhaustive note on the subject submitted by the Director of Agriculture, Bombay, was recorded. The Director of Agriculture, Punjab, the Director of Land Records, Central Provinces and the Directors of Agriculture, Madras and Baroda, have all gone into the matter and furnished their remarks. (Relevant extracts from their replies are given in Enclosures 4, 5 and 6.) The Director of Agriculture, Burma, has informed that the Burma press returns are hardly likely to be as accurate as desired, since the Cotton Ginning and Pressing Factories Act is not in force in Burma.

The Director General of Commercial Intelligence and Statistics' reply and the Secretary's note referred to therein are attached (Enclosures 7 and 8*). Resolution No. VIII of the Thirteenth Board of Agriculture (1924) referred to in this reply was :—

> "While every effort should be made to take the fullest possible advantage of trade statistics, it is not possible to obtain from such statistics the figures for the total production from which to calculate the standard outturn per acre. Crop-cutting experiments must remain the basis of such standards,"

and the recommendation of the Royal Commission on Agriculture referred to was that—

> "Changes in the figures of standard yield of crops should be made only on data supplied by crop-cutting experiments."

The Director General of Commercial Intelligence and Statistics appears to be under the misapprehension that the Secretary, Indian Central Cotton Committee, overlooked the above recommendations of the Board of Agriculture and the Royal Commission on Agriculture. The point which the note in question dealt with was the possibilities and limitations of raw cotton trade statistics and, as such, it could not but refer to Mr. Stuart's method, a full and complete description of which is given in the Agricultural Journal of India, 1919, and in the Proceedings of the Eleventh Board of Agriculture, 1919. These two references were given only for the benefit of those who might not have seen them and no suggestion was made in the note that crop-cutting experiments should be discontinued. The reason for the rejection of Mr. Stuart's method by the Board of Agriculture of 1924 was that trade statistics did not furnish sufficient information to arrive at an accurate estimate of production. Conditions have since changed in regard to cotton statistics, and production of cotton can be estimated at present with a greater degree of accuracy than was possible in 1924. The earlier part of the Secretary's note elaborated this aspect, and made the accurate estimation of the crop of any one block the pre-requisite for the application of the method. The judicious exploitation, therefore, of this method ought to bring to light discrepancies, if any, in the product "Standard yield x Condition factor", and where either of these factors is fairly accurately reliable, the discrepancy must lie in the other factor. Steps to remedy this defect can then be devised. This is all the more necessary, as on account of financial stringency and other causes crop-cutting experiments leave much to be desired.

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*Not printed.

Enclosure 1.

Table showing the estimated cotton crop and the number of bales pressed in India during the season 1931–32.

—	Estimated crop (Bales of 400 lbs. net).	Number of bales pressed (running bales).	Excess (+) or deficit (—) of cotton pressed over estimated crop.	Remarks.
1	2	3	4	5
BOMBAY*.				*Estimated crop figures for Bombay taken from the April 1932 Forecasts of Bombay and Baroda. Detailed figures for States supplied by the Director of Agriculture, Bombay, separately.
Sind.				
Hyderabad	16,465	....	....	
Thar Parkar	42,604	....	....	
Nawabshah	24,101	....	....	
Other Sind Districts ..	272	....	....	
Total—British ..	83,442	115,347	+ 31,905	
Khairpur	2,287	....	— 2,287	
Total—Sind ..	85,729	115,347	+ 29,618	
KATHIAWAR.				
(*States of Western India*).				
Cutch	5,306	2,519	— 2,787	
Morvi	51,094	26,927	— 24,167	
Wankaner	4,567	3,280	— 1,287	
Rajkot	937	3,015	+ 2,078	
Gondal	9,429	7,836	— 1,593	
Junagadh	48,490	50,667	+ 2,177	
Dhrol	43	....	— 43	
Nawanagar	11,735	4,758	— 6,977	
Amreli (District of Baroda State).	10,111	5,007	— 5,104	
Jafrabad	46	....	— 46	
Porbandar	2,743	3,035	+ 292	
Bhavnagar	152,366	65,014	— 87,352	
Palitana	7,123	....	— 7,123	
Manawadar	5,517	7,992	+ 2,475	
Sardargadh	1,895	5,942	+ 4,047	
Jasdan	2,045	....	— 2,045	
Other W. K. Agency States ..	8,316	....	— 8,316	
Banas Kantha Agency ..	2,439	....	— 2,439	
Palanpur	148	....	— 148	
Radhanpur	1,627	6,378	+ 4,751	
Dhrangadra	61,250	24,723	— 36,527	
Wadhwan	14,960	14,349	— 611	
Limbdi	5,750	11,063	+ 5,313	
Lakhtar	Not known.	4,608	....	

1	Estimated crop (Bales of 400 lbs. net). 2	Number of bales pressed (running bales). 3	Excess (+) or deficit (—) of cotton pressed over estimated crop. 4	Remarks. 5
BOMBAY—*contd.*				
Muli	8,170	4,337	— 3,833	
Sayla	3,583	2,225	— 1,358	
Other E. K. Agency States ..	28,610	....	— 28,610	
Ageney Areas (Wadhwan Civil Station).	....	8,111	+ 8,111	
Total—Kathiawar ..	448,300	261,786	—186,514	
Gujerat.				
Ahmedabad	78,921	....	....	
Kaira	17,218	....	....	
Panch Mahals	6,238	....	....	
Broach	67,122	....	....	
Surat	36,283	....	....	
Total—British ..	205,782	392,117	+186,335	
Mahi Kantha Agency.				
Idar	5,438	4,306	— 1,132	
Katosan	42	4,524	+ 4,482	
Other States	9,961	....	— 9,961	
Total ..	15,441	8,830	— 6,611	
Rewa Kantha Agency.				
Rajpipla	31,204	30,702	— 502	
Chhota Udepur	14,947	9,316	— 5,631	
Other States	11,034	....	— 11,034	
Total ..	57,185	40,018	— 17,167	
Cambay	2,418	2,634	+ 216	
Surat States	2,567	....	— 2,567	
Total—Gujerat States ..	77,611	51,482	— 26,129	
Baroda State.				
Baroda District	68,793	55,485	— 13,308	
Navsari District	33,324	11,086	— 22,238	
Mehsana District ..	26,181	54,349	+ 28,168	
Total ..	128,298	120,920	— 7,378	
Total—Indian States ..	205,909	172,402	— 33,507	
Total—Gujerat ..	411,691	564,519	+152,828	

1	Estimated crop (Bales of 400 lbs. net). 2	Number of bales pressed (running bales). 3	Excess (+) or deficit (—) of cotton pressed over estimated crop. 4	Remarks. 5
BOMBAY—*contd.*				
North Deccan.				
West Khandesh	68,158	....	....	
East Khandesh	81,917	....	....	
Nasik	14,711	....	....	
Total—North Deccan ..	164,786	135,867	— 28,919	
East Deccan.				
Ahmednagar	25,661	....	....	
Sholapur	8,193	....	....	
Bijapur	81,695	....	....	
Total—British ..	115,549	77,216	— 38,333	
Akalkot	378	....	— 378	
Other Deccan States ..	2,081	....	— 2,081	
Total—Indian States ..	2,459	....	— 2,459	
Total—East Deccan ..	118,008	77,216	— 40,792	
West Deccan.				
Poona	1,177	....	....	
Satara	2,221	....	....	
Belgaum	38,693	....	....	
Dharwar	115,745	....	....	
Total—British ..	157,836	136,377	— 21,459	
S. M. C. States.				
Kolhapur	6,012	1,470	— 4,542	
Jamkhandi	13,889	5,333	— 8,556	
Sangli	11,693	4,883	— 6,810	
Mudhol	7,554	1,878	— 5,676	
Miraj (Senior)	4,782	486	— 4,296	
Savanur	1,470	3,305	+ 1,835	
Other States	6,888	....	— 6,888	
Total—Indian States ..	52,288	17,356	— 34,933	
Total—West Deccan ..	210,124	153,732	— 56,392	

——	Estimated crop (Bales of 400 lbs. net).	Number of bales pressed (running bales).	Excess (+) or deficit (—) of cotton pressed over estimated crop.	Remarks.
1	2	3	4	5
BOMBAY—*concld.*				
Totals including loose cotton received in the mills.				
Sind	85,729	115,347	+ 29,618	
Kathiawar	448,300	261,786	—186,514	
Gujerat	411,691	565,969	+154,278	
North Deccan	164,786	146,630	— 18,156	
East Deccan	118,008	93,355	— 24,653	
West Deccan	210,124	173,845	— 36,279	
Total—Bombay ..	1,438,638	1,356,932	— 81,706	
PUNJAB AND DELHI.*				*Estimated crop figures for Punjab taken from the Punjab Forecast of February 1932, which shows a total of 514,000 bales only. This estimate has since been raised to 618,000 bales in the April 1932 All-India Cotton Forecast, details by districts for which are not known.
Ambala.				
Hissar	26,900	....	....	
Rohtak	17,400	....	....	
Gurgaon	8,600	....	....	
Karnal	15,900	....	....	
Ambala	8,300	....	....	
Total—British ..	77,100	105,528	+ 28,428	
Delhi	2,000	....	— 2,000	
Patiala	24,300	....	— 24,300	
Nabha	10,600	28,502	+ 17,902	
Sind	12,300	20,411	+ 8,111	
Total—Indian States ..	47,200	48,913	+ 1,713	
Total—Ambala ..	126,300	154,441	+ 28,141	
Jullundur.				
Kangra	800			
Hoshiarpur	6,700			
Jullundur	10,300			
Ludhiana	12,900			
Total—British ..	30,700	15,665	— 15,035	
Chamba	....	....	....	
Mandi	....	....	....	
Suket	....	....	....	
Sirmur	....	....	....	

1	Estimated crop (Bales of 400 lbs. net). 2	Number of bales pressed (running bales). 3	Excess (+) or deficit (—) of cotton pressed over estimated crop. 4	Remarks 5
PUNJAB AND DELHI—*contd.*				
Kapurthala	1,800	....	— 1,800	
Malerkotla	1,500	....	— 1,500	....
Total—Indian States ..	3,300	....	— 3,300	
Total—Jullundur ..	34,000	15,665	— 18,335	
Ferozepore.				
Simla	....	....	....	
Ferozepore	36,200			
Mianwali	100			
Total—British ..	36,300	63,180	+ 26,880	
Faridkot	6,500	12,497	+ 5,997	
Total—Indian States ..	6,500	12,497	+ 5,997	
Total—Ferozepore ..	42,800	75,677	+ 32,877	
Bahawalpur	19,500	14,775	— 4,725	
Total—Cis-Sutlej Territory ..	96,300	106,117	+ 9,817	
Lahore	70,800	92,274	+ 21,474	
Rawalpindi	39,600	57,379	+ 17,779	
Multan	183,200	291,426	+108,226	
Loose cotton received in the mills.	....	2,317	....	
Total—Punjab and Delhi ..	516,200	703,954	+187,754	
N. W. F. Province ..	4,000	286	— 3,714	
RAJPUTANA.				
Ajmer-Merwara (Br.) ..	*11,000	21,603	+ 10,603	
Bikaner	†5,387	14,428	+ 9,041	
Jhalawar	†3,465	2,353	— 1,112	
Marwar	†6,989	9,017	+ 2,028	
Mewar	†26,956	34,378	+ 7,422	

*Figures taken from the All-India April 1932 Forecast.

†Figures taken from the All-India Forecast of February 1932. In April 1932 Forecast the total is reduced from 75,000 to 61,000 bales. Details for this are not known.

—	Estimated crop (Bales of 400 lbs. net).	Number of bales pressed (running bales).	Excess (+) or deficit (−) of cotton pressed over estimated crop.	Remarks.
	2	3	4	5
RAJPUTANA—*contd.*				†Figures taken from the All-India Forecast of February 1932. In April 1932 Forecast the total is reduced from 75,000 to 61,000 bales. Details for this are not known.
Shahpura	†999	1,728	+ 729	
Tonk	†3,312	4,990	+ 1,678	
Bundi	†1,675	No pressing.	− 1,675	
Kishangarh	†3,085	....	− 3,085	
Jaipur	†13,588	6,176	− 7,412	
Alwar	†514	....	− 514	
Kotah	†5,398	....	− 5,398	
Other Indian States ..	†4,076	....	− 4,076	
Total—Rajputana ..	86,444	94,673	+ 8,229	
CENTRAL INDIA*.				*Estimated crop figures for Central India States supplied by the Director-General of Commercial Intelligence and Statistics. ‡Figures taken from the All-India April 1932 Forecast.
Gwalior	‡76,000	....	− 76,000	
Indore	66,197	58,415	− 7,782	
Bhopal	9,818	1,454	− 8,364	
Narsingarh	3,145	2,767	− 378	
Rajgarh	5,801	....	− 5,801	
Other States in Bhopal Agency.	1,341	....	− 1,341	
Bhagheikhand Agency ..	1,420	....	− 1,420	
Datia	750	96	− 654	
Other States in the Bundelkhand Agency including Alipura.	2,963	....	− 2,963	
Dewas (S. B.)	1,745	....	− 1,745	
Dewas (J. B.)	2,162	....	− 2,162	
Jaora	4,841	12,817	+ 7,976	
Ratlam	4,576	9,742	+ 5,166	
Other States in the Malwa Agency.	2,075	....	− 2,075	
Dhar	11,626	14,680	+ 3,054	
Jhabua	1,105	1,394	+ 289	
Barwani	8,104	8,331	+ 227	
Alirajpur	300	....	− 300	
Other Southern States ..	61	....	− 61	
Total—Central India ..	204,030	109,696	− 94,334	
UNITED PROVINCES@.				@Estimated crop figures taken from February 1932 U. P. Forecast.
Upper Doab	105,035	71,052	− 33,983	
Middle Doab	67,417	30,858	− 36,559	
Lower Doab and Bundelkhand	16,575	16,964	+ 389	

——	Estimated crop (Bales of 400 lbs. net).	Number of bales pressed (running bales).	Excess (+) or deficit (—) of cotton pressed over estimated crop.	Remarks.
1	2	3	4	5
UNITED PROVINCES —*contd.*				
Rohilkhand including Rampur State.	26,047	6,210	— 19,837	
Rest of the Province ..	2,758	....	— 2,758	
Loose cotton received in mills	....	14,367	+ 14,367	
Total—United Provinces ..	217,832	139,451	— 78,381	
Bihar and Orissa ..	14,000	....	— 14,000	
Bengal	— 17,000	31,273	+ 14,273	
Assam	15,000	12,996	— 2,004	
CENTRAL PROVINCES AND BERAR*.				*Estimated crop figures taken from the C. P. February 1932 Forecast. These are in bales of 392 lbs. net.
Jubbulpore	1,300	....	— 1,300	
Nerbudda	11,100	5,577	— 5,523	
Nimar	42,200	43,699	+ 1,499	
Nagpur	74,600	81,225	+ 6,625	
Satpura	11,400	2,249	— 9,151	
Chattisgarh	700	....	— 700	
Berar	358,000	329,807	— 28,193	
Loose cotton received in mills.	....	20,743	+ 20,743	
Total—Central Provinces and Berar.	499,300	483,300	— 16,000	
Hyderabad State.. ..	509,000	167,250	—341,750	
Mysore State	9,000	26,247	+ 17,247	
MADRAS‡.				‡Estimated crop figures as shown in the April 1932 Madras Cotton Forecast. It however appears from the recent "weekly statements" that the D. A., Madras, has changed these estimates to 131,250; 35,570; 126,760; 98,350; 31,630; and 423,610 bales respectively.
Tinnevellies	140,000	†107,056	— 32,944	
Salems	36,200	†32,984	— 3,216	
Cambodias	119,800	†139,429	+ 19,629	
Northerns and Westerns ..	99,600	†96,171	— 3,429	
Cocanadas and others ..	32,500	†36,562	+ 4,062	†Cotton pressed in pressing factories and loose cotton received at mills from the 1st February 1932 to the 9th December 1932.
Total—Madras ..	428,100	†412,202	— 15,898	
Burma	34,000	13,715	— 20,285	

Enclosure 2.

Raw Cotton Trade Statistics of each Minor trade block—Season 1931–32.

Internal Trade Blocks.	In bales of 400 lbs. net.		
	Net exports.	Mill consumption.	Indicated production.
ASSAM.			
Upper Assam	760	....	760
Lower Assam	6,399	....	6,399
Surma Valley	4,177	....	4,177
Total ..	11,336	....	11,336
BENGAL.			
Calcutta	— 72,751	43,270	....
Western Bengal	— 4,153	8,674	4,521
Eastern Bengal	— 5,369	46,362	40,993
Northern Bengal	5,881	....	5,881
Dacca	— 517	4,084	3,567
Chittagong Port	7,683	....	7,683
Total ..	— 69,226	102,390	62,645
BIHAR AND ORISSA.			
Patna City	— 367	....	....
Bihar (excluding Patna City)	5,193	....	5,193
Chota-Nagpur	— 171	....	....
Orissa	70	....	70
Total ..	4,725	....	5,263
UNITED PROVINCES.			
Upper Doab	51,424	28,231	79,655
Middle Doab	36,776	28,790	65,566
Cawnpore City	—150,468	178,349	27,881
Lower Doab	— 811	....	....
Bundelkhand	2,191	....	2,191
Benares	— 4,894	3,307	....
Gorakhpur	— 816	....	....
Rohilkhand	— 6,820	13,957	7,137
North Oudh	— 1,350	....	....
South Oudh	— 2,901	4,186	1,285
Total ..	— 77,669	256,820	183,715
PUNJAB.			
Delhi Province Territory	— 66,818	75,262	8,444
Rest of Cis-Sutlej	357,618	3,354	360,972
Territory between Sutlej and Jhelum ..	477,974	11,065	489,039
Territory between Jhelum and N. W. F. P. ..	1,875	....	1,875
North West Frontier Province ..	2,990	....	2,990
Total ..	773,639	89,681	863,320

Internal Trade Blocks.	In bales of 400 lbs. net.		
	Net exports.	Mill consumption.	Indicated production.
Sind and British Baluchistan.			
Sind and British Baluchistan excluding Karachi	103,970	....	....
Karachi	—719,638	....	....
Total ..	—615,668	....	....
Central Provinces and Berar.			
Jubbulpore	— 1,734	1,581	....
Nerbudda	7,422	....	7,422
Nimar	56,058	7,092	63,150
Nagpur	44,651	79,473	124,124
Chattisgarh	— 8,385	13,246	4,861
Berar	265,517	26,872	292,389
Satpura	13,330	....	13,330
Total ..	376,859	128,264	505,276
Bombay Presidency.			
Bombay Port	— 961,583	611,606	....
Gujerat	— 66,511	397,379	330,868
Kathiawar	168,355	18,849	187,204
Konkan	— 3,797	....	....
North Deccan	113,995	37,556	151,551
East Deccan	— 16,646	99,172	82,526
West Deccan	— 3,928	1,356	....
Southern Mahratta Country	71,168	53,689	124,857
Goa	— 3,081	....	....
Total ..	—702,028	1,219,607	877,006
Madras Presidency.			
Madras Port	— 96,904	58,625	....
French Ports	— 5,264	20,257	14,993
Other Sub-Ports	70,829	....	70,829
Circars	1,224	....	1,224
Deltas	17,545	2,360	19,905
Deccan	83,502	....	83,502
North Carnatic	4,113	....	4,113
South Carnatic	208	....	208
Central Districts	31,390	75,182	106,572
Southern Districts	— 86,843	119,005	32,162
West Coast	— 4,377	10,883	6,506
The Hills	....	....	....
Total ..	15,423	286,312	340,014
Rajputana	102,642	27,325	129,967
Central India	38,061	146,556	184,617
Nizam's Territory	170,892	31,290	202,182
Mysore	— 28,810	49,293	20,483
Kashmir	— 177	....	....
Total ..	....	....	3,385,824

Enclosure 3.

Raw Cotton Trade Statistics of each major trade block. Season 1931–32.

Trade Blocks-Provinces.	Indicated production (In bales of 400 lbs. net).				
	Imports.	Exports.	Net exports by rail and river.	Mill consumption.	Exports by sea.
1	2	3	4	5	6
*Assam	591	11,928	11,337	....	....
*Bengal	71,805	2,579	— 69,226	102,390	48,843
*Bihar and Orissa	3,810	8,535	4,725	....	....
*United Provinces of Agra and Oudh	158,334	80,664	— 77,670	256,820	....
*Punjab (*a*)	42,373	816,012	773,639	89,681	....
*Sind and British Baluchistan ..	616,603	935	—615,668	....	591,909
*Central Provinces and Berar.	34,662	411,521	376,859	128,264	....
*Bombay Presidency (*b*) ..	778,377	76,350	—702,027	1,219,607	893,631
*Madras Presidency ..	40,747	56,170	15,423	286,312	26,589
Rajputana (*c*)	13,759	116,401	102,642	27,325	....
Central India	64,524	102,585	38,061	146,556	....
Nizam's Territory ..	172	171,064	170,892	31,290	....
Mysore	42,793	13,983	— 28,810	49,293	....
Kashmir	182	5	— 177	....	....
Total ..	1,868,729	1,868,729	....	2,337,538	1,560,972

*Includes Indian States.
(*a*) Includes Delhi Province and North-West Frontier Province.
(*b*) Excludes Sind.
(*c*) Includes Ajmer-Merwara.

Imports of foreign cotton into Bengal were 7,291 bales, Bombay 522,463 bales, Sind nil, Madras 21,745 bales, and Burma nil—Total imports into India were 551,499 bales.

Enclosure 3.—(contd.)

Trade Blocks. Provinces.	Indicated production (In bales of 400 lbs. net). Variation in stocks. (d).	Indicated production (In bales of 400 lbs. net). Total	Total number of bales pressed (in running bales) and loose cotton received in mills.	Crop forecasted in the All-India Cotton Forecast of April 1932.
1	7	8	9	10
*Assam	..	11,337	12,996	15,000
*Bengal	..	82,007	31,273	17,000
*Bihar and Orissa ..	..	4,725	....	14,000
*United Provinces of Agra and Oudh	..	179,150	139,451	218,000
*Punjab (a) ..	..	863,320	704,240	624,000
*Sind and British Baluchistan.	..	(g)	115,347	85,000
*Central Provinces and Berar.	..	505,123	483,300	484,000
*Bombay Presidency (b) ..	— 25,023	1,386,188	1,241,585	1,351,000
*Madras Presidency ..	..	328,324	(e) 412,202	428,000
Rajputana (c)	..	129,967	94,673	72,000
Central India	..	184,617	(f) 109,696	204,000
Nizam's Territory ..	..	202,182	167,250	509,000
Mysore	..	20,483	26,247	9,000
Kashmir	..	(g)	....	....
Total ..	— 25,023	3,897,423	3,538,260	4,030,000

(d) Only the stocks in Bombay are known. The variation shown here is the variation in stocks of Indian cotton held by exporters, etc. (exclusive of cotton held by mills) between the 31st August 1931 and the 31st August 1932.

(f) Incomplete as press returns from Gwalior State are not yet available.

(e) Season in the Madras Presidency runs from 1st February to 31st January. The figure relates to the period 1st February 1932 to 9th December 1932.

(g) Omitted being negative quantities.

Exports from Burma were 20,680 bales, thus making a total of 1,581,652 bales for the whole of India.

Enclosure 4.

Extract from D. O. letter No. 22378, dated the 10th December 1931, from the Director of Agriculture, Punjab, Lahore, to the Secretary, Indian Central Cotton Committee.

* * * * * *

A fresh statement is attached. It has been prepared after taking into account the bales pressed in the Nabha, Jind and Bahawalpur States. The bales pressed in the Faridkot State, which does not report estimates of yield of cotton, etc., and consequently never was included in our cotton forecasts, have been excluded. After making these adjustments the number of bales pressed now comes to 12·2 per cent. in excess of our forecast.

2. With regard to the British Punjab alone (excluding the Indian States) it may be noted that 52,168 bales imported into British Punjab are included in the 798,113 bales of 400 lbs. each reported by the presses in the Punjab. These, therefore, may be deducted when comparing press figures with our forecast for British Punjab. This leaves a balance of 745,945 bales pressed as against the forecast of 666,300 bales, i.e., there is a difference between these two figures of 79,645 bales or say 11·1 per cent. In this connection it may be noted that the mixing of the previous year's crop with the new year's crop does take place, but in order to ascertain the extent to which this is done, an exhaustive enquiry throughout the Province would be necessary and it is regretted that such an enquiry cannot be taken up by the Department at present on account of the acute financial stringency.

* * * * *

Statement.

Year.	Estimated outturns of yield of cleaned cotton in terms of bales of 400 lbs. as reported in the Final Cotton Forecast.	Bales of cotton reported to have been pressed according to returns received from presses.		Difference between columns 2 and 4.	
		As published in the Provincial Cotton Press Returns.	Expressed in terms of 400 lbs.	Number of bales.	Percentage.
1	2	3	4	5	6
1930-31..	Punjab 666,300	817,553	798,113	..	..
	Indian States reporting for our Forecasts 99,700	61,378	61,378	..	..
	Total .. 766,000	878,931	859,491	93,491	12·2

Enclosure 5.

Copy of letter No. 185-II, dated the 27th May 1932, from the Director of Land Records, Central Provinces, to the Secretary, Indian Central Cotton Committee.

SUBJECT.—*Cotton Statistics. Comparison of cotton press returns with cotton forecasts.*

With reference to the correspondence ending with your letter No. 4285, dated the 18th April 1932, on the subject mentioned above, I have the honour to say that I agree that all cotton received at the mills should have been shown in column 5 of

Statement A forwarded with my letter No. 101/II, dated the 19th March 1932. The misunderstanding in my office which led to the exclusion from column 5 of Statement A of purchases made outside the block and brought to mills by rail was caused by a suggestion made in 1927 by the Director-General of Commercial Intelligence that the production of a block should be equal to the exports of cotton from that area *plus* the amount of cotton grown within that area and consumed by the mills within that area. To give effect to this suggestion the mills were asked to supply each year figures showing the cotton grown within their blocks which was purchased for consumption. The figures thus obtained were intended to work out the production figure on the lines suggested by the Director-General and should have been supplemented by adding the purchases made outside the block when calculating the production figure based on net exports as shown in column 4 of Statement A. This oversight seems to have been continuing ever since; so far as 1930-31 is concerned it has resulted in the production figure being approximately 65,379 bales too low (15,225 bales purchased outside blocks but within the province *plus* 50,154 bales imported from outside the province mainly for mill consumption = 65,379 bales). Thus the total cotton received in the mills was 130,000 bales which is only 1,180 bales less than the consumption figures shown in Statement No. I attached to your circular No. 2235, dated the 15th January 1932. I accept the figures of mill consumption given in your statement as correct and forward a revised Statement A.

2. In the revised Statement B attached, the total of column 3 has been increased by 98,687 bales as pointed out by you but the total of column 2 has not been reduced by 21,700 bales as it has been ascertained from the Director of Industries that the 1,228,604 bales reported in his letter No. 659/D, dated the 4th February 1932, do not represent a bale weight of 400 lbs. lint but are inclusive of the weight for wrapping and hoops. The estimated crop in column 2 is expressed in bales of 392 lbs. lint.

STATEMENT A (Revised).

Statement showing raw cotton trade and mill consumption from 1st October 1930 to 30th September 1931.

Block.	Imports.	Exports.	Net exports.	Local mill consumption.	Production.
1	2	3	4	5	6
	Mds.	Mds.	Mds.	Bales.	Bales.
Jubbulpore ..	9,587	3,077	— 6,510 — 1,367 bales.	3,481	2,114
Nerbudda ..	60	138,836	138,776 29,131 bales.	..	29,131
Nimar ..	25,671	697,031	671,360 140,927 bales.	6,708	147,635
Nagpur ..	189,000	1,601,397	1,412,397 296,480 bales.	84,232	380,712
Chhatisgarh ..	67,721	31	—67,690 —14,209 bales.	12,688	— 1,521
Satpura ..	201	190,926	190,725 40,036 bales.	..	40,036
Berar ..	31,438	3,104,149	3,072,711 645,001 bales.	24,071	669,072
Total ..	323,678	5,735,447	5,411,769 1,135,999 bales.	131,180	1,267,179

STATEMENT B. (Revised)

Blocks.	Estimated crop for 1930-31.	Quantity of cotton pressed into bales of 400 lbs. each in 1930-31.	Difference of column 2 over column 3.	Number of carts of cotton marketed from districts included in block in 1930-31.	Number of carts of column 5 converted into bales by taking 1-20 cart = 1 bale.	Difference of column 2 over column 6.
1	2	3	4	5	6	7
	Bales.	Bales.	Bales.	No. of carts	Bales.	Bales.
Jubbulpore ..	1,300	....	1,300	1,267	1,056	244
Nerbudda ..	19,000	22,511	— 3,511	12,579	10,482	8,518
Nimar ..	93,900	89,886	4,014	51,898	43,248	50,652
Nagpur ..	215,300	282,231	— 66,931	333,034	277,528	—62,228
Chhatisgarh ..	800	....	800	....	....	800
Satpura ..	34,900	13,058	21,842	8,739	7,282	27,618
Total for Central Provinces ..	365,200	407,686	— 42,486	407,517	339,596	25,604
Berar ..	718,500	722,231	— 3,731	863,898	719,915	— 1,415
Total for Central Provinces and Berar.	1,083,700	1,129,917 98,687	—144,904	1,271,415	1,059,511	24,189
		1,228,604				

Enclosure 6.

Copy of letter R. O. C. No. C. 398/32, dated the 19th December 1932, from the Director of Agriculture, Madras, to the Secretary, Indian Central Cotton Committee.

SUBJECT.—*Cotton Statistics—Comparison of cotton press returns with cotton forecasts.*

Ref: Your letter No. 2048 of 1932, dated the 13th December 1932.

I have the honour to invite your attention to the note on the Madras cotton crop of 1930-31 forwarded with my letter D. Dis. No. C. 314/32, dated the 10th September 1932, which has been acknowledged in your letter No. 246 of 1932, dated the 15th September 1932. I have compared therein the estimate with the trade figures furnished in the press returns of 1931-32 and explained the discrepancies between the two figures. This comparison will be continued for attaining accuracy in the cotton forecast.

Extract from Note on the "Madras Cotton Crop, 1930-31" received from the Director of Agriculture, with his letter D. Dis. C. No. 314.32, dated the 10th September 1932.

*

3. The table below compares the estimated yield with the trade figures :—

COTTON, 1930-31—CROP.

COMPARISON OF ESTIMATES WITH TRADE FIGURES.

(*Figures in hundreds of bales of* 400 *lbs. lint*).

Particulars.	South.		Deccan.	Rest of the Presidency.	Presidency.
	Tinnevellies and Salems.	Cambodia.	Northerns and Westerns mainly.	Cocanadas and Others.	
1	2	3	4	5	6
	Bales.	Bales.	Bales.	Bales.	Bales.
Pressed at presses *plus* loose cotton received at mills in 1931-32	1,110	862	1,015	318	3,305
Yield as estimated in the season and crop report ..	1,641	877	1,015	276	3,809
Percentage of increase (+) or decrease (—) of the estimated yield as compared with the total crop ..	48	2	*Nil*	— 13	15

Note.—(1) In the case of Tinnevellies and Salems, the average yield per acre was found later to be high and was reduced from 110 to 103 lbs. On this basis, the estimated yield in the season and crop report would be only 156,000 bales. Even so the difference would be 41 per cent. This large difference may be due (*i*) to the withholding of stock by the *ryots* in the expectation of better prices and (*ii*) to the larger consumption of cotton in hand spinning.

(2) In the case of Cocanadas, the difference may be due to the arrival of cotton from His Exalted Highness The Nizam's Dominions by rail and road for which statistics are not available.

Copy of letter No. 2719/1, dated the 3rd January 1933, from the Director of Agriculture, Baroda State, Baroda, to the Secretary, Indian Central Cotton Committee.

I have the honour to make the following observations to your letter No. 2048 of 13th December 1932.

The first thing that I wish to draw your attention to is the weight of the bale which is taken as 400 lbs. of lint nett. We had made certain enquiries regarding the actual weight of the bales reported pressed from the factories and it has varied from 375 lbs. onwards. The bales calculated in the forecast are on the standard nett weight of 400 lbs. while the bales pressed varying in the manner indicated introduce a contributory error, this does not seem to have been noticed in the note. This point may therefore be cleared up.

I shall confine my attention to the Baroda figures alone. The difference in this connection with regard to Baroda, Navsari, and to a certain extent Amreli are explainable on account of the mixed nature of other than State territories with it, but the excess of 12,498 bales in Kadi (now to be called Mehsana) are not explicable and it certainly shows ingress of cotton that does not belong to the region in which it is pressed. A restriction on transport may become desirable here when a suitable type for dissemination was available.

I have no further observations and hope the points mentioned will receive due consideration.

Enclosure 7.

Copy of letter No. 587-T, dated the 24th December 1932, from the Director General of Commercial Intelligence and Statistics, to the Secretary, Indian Central Cotton Committee.

Cotton Statistics.

With reference to your letter No. 2048, dated the 13th December 1932 on the above subject, I have the honour to enclose a note containing my views on the method of calculation adopted in the note circulated with your Circular No. 2235, dated the 15th January 1932.

2. It is observed that a suggestion was made in the note asking the local authorities to improve the standard yield of cotton on the basis of the trade statistics as recommended by the Board of Agriculture in their eleventh meeting held in December 1919. It has probably been overlooked that the same Board at a subsequent meeting held in January 1924 considered the points again and came to an altogether different finding (*vide* Resolution No. VIII passed at the thirteenth meeting of the Board of Agriculture 1924). The findings of the Board in 1924 were supported by the Royal Commission on Agriculture in India which made a definite recommendation on the point (*vide* recommendation No. 13 on page 623 and paragraph 528 on page 607 of the Report of the Royal Commission on Agriculture in India). This recommendation of the Royal Commission was accepted by the Government of India and local Governments were asked to give effect to it along with the other recommendations of the Commission as soon as practicable. In the circumstances, the suggestion made in the note forwarded with your Circular letter of the 15th January 1932 appears to be a retrograde step. I would accordingly suggest that this department may be consulted before making any suggestions to the local authorities for improving the method of preparation of crop forecasts in future.

NOTE.

It is not possible to effect a satisfactory check on the forecast production unless the two uncertain elements *viz.*, stock and extra-factory consumption are known with a reasonable degree of accuracy. Subject to the above, the following remarks are offered:—

(1) Allowance should be made in the calculation for the difference in weights of running bales as compared with the statistical bales of 400 lbs. each. If this is done a difference of ·2 million bales could be explained.

(2) Due consideration should be given to the variation in stocks. On the basis of stock figures reported by the East India Cotton Association for Bombay supplemented by data relating to upcountry stocks as procured from the leading cotton firms, it is possible to explain a further difference of ·2 million bales.

(3) Import figures should be taken into account while examining the position by rail-borne trade statistics as these do not make any difference between Indian and foreign cotton. Neglect to do so has probably led to anomalous results obtained for provinces like Bombay and Bengal.

(4) The compilation work seems to be defective in certain respects. For instance while the revised production for Bombay was taken to examine the position relating to that province, the unrevised production for that province was utilised for the purpose of examining the all-India position in Statement II.

The position has since changed with the issue of the supplementary cotton forecast in April 1932 where the 1930-31 crop was revised from 4,820,000 to 5,224,000 bales.

Supplementary Note (1).

This note is supplementary to the one already circulated. The information contained in this note has been furnished by one of the leading export firms of Bombay who compile their own estimates of the Indian Cotton Crop. In Table I, Column 2, the Indian Cotton Crop of 1931-32 classified by varieties as estimated by them is given. In Column 3 I have added for purposes of comparison the figures as published in the All-India April 1932 Forecast. In Table II is given the information regarding supply and distribution of cotton in India as they put it.

This is placed before the Committee in the hope that it might be helpful to the authorities responsible for the compilation of cotton forecasts, if passed on to them.

Reference is invited to Enclosure 1 of the note already circulated. A member has since asked that the excesses or deficits shown in Column 4 of that statement should be expressed as so much per cent. of the forecasted crop. This has now been done with regard to the totals for each block of cotton pressed and is shown in the attached Table III.

TABLE I.

Indian Cotton Crop of 1931-32.

Estimates. (In bales).

Descriptions of cotton.	Trade Estimate.	Government Estimate. (April 1932).
1	2	3
BENGAL-SIND		
United Provinces	183,900	218,000
Rajputana	80,000	72,000
Sind-Punjab	515,100	479,000
Sind Deshi	100,500	
Others	....	16,000
Total ..	879,500	785,000
OOMRAS		
Khandesh	134,600	165,000
Central India	274,200	204,000
Barsi-Nagar	210,800	355,000
Hyderabad Gaorani		115,000
Berar	248,600	346,000
Central Provinces	166,000	138,000
Total ..	1,034,200	1,323,000
DHOLLERAS	469,100	577,000
American—Punjab	434,500	217,000
Do. Sind		14,000
Broach	329,100	280,000
Surti Broach	144,400	
Coompta-Dharwars	180,100	249,000
Westerns and Northerns—Madras	164,800	221,000
Do. Bombay	72,700	
Cocanadas	39,900	34,000
Tinnevellies	172,400	140,000
Cambodias	119,600	121,000
Salems	....	36,000
Comilla, (Calcutta)	62,400	67,000
Burmahs, other sorts		
Grand Total ..	4,102,700	4,064,000
Domestic consumption	750,000	....
Total Crop ..	4,852,700	4,064,000

TABLE No. II.

SUPPLY AND DISTRIBUTION OF COTTON IN INDIA DURING THE SEASON 1931-32.

Supply.		
Opening Balance (*a*)	1,092,300	bales.
Bombay Mill Stores (*b*)	164,200	,,
East India Yield (*c*)	4,102,700	,,
Domestic Consumption (*d*)	750,000	,,
Foreign Imports (*e*)	538,000	,,
Total Supply	6,647,200	bales.
Distribution.		
All India Exports (*f*)	1,580,200	bales.
Burma Off take (*g*)	33,600	,,
Domestic Consumption (*d*)	750,000	,,
Indian Power Mills, Indian Cotton (*b*)	2,345,100	,,
Indian Power Mills, Foreign Cotton (*h*)	538,000	,,
	5,246,900	bales.
End of season balance (*a*)	1,201,000	,,
Bombay Mill stocks (*b*)	193,400	,,
	6,641,300	bales.
Unexplained difference	5,900	,,
Total Distribution	6,647,200	bales.

(*a*) Private Estimate—including inland stocks.
(*b*) Figures taken from East India Cotton Association Publications.
(*c*) Private Estimate—For details see Table No. I.
(*d*) Conventional figure.
(*e*) Figures taken from Bombay Chamber of Commerce "Daily Arrivals of Cotton etc."
(*f*) Figure taken from Chambers of Commerce returns and private estimates.
(*g*) Put in to off-set Burma estimates included in (*c*).
(*h*) Put in to off-set (*e*).

N.B.—Some years ago there used to be a fairly big figure included on the distribution side under the heading "Destroyed by Fire".

TABLE III.

Excess or deficit of cotton pressed over the forecasted crop shown in column 4 of Enclosure 1 of the Note on Subject 13.

Division or block.	Percentage excess (+) or deficit (—)	Division or block	Percentage excess (+) or deficit (—)
Sind	+35	Multan	+59
Kathiawar	—42		
† Gujerat	+37	† Total Punjab and Delhi	+36
† North Deccan	—11	North-West Frontier Province.	—93
† East Deccan	—21	Rajputana	+10
† West Deccan	—17	Central India	—46
† Total Bombay	—6	Upper Doab	—31
		Middle Doab	—54
Ambala	+22	Lower Doab and Bundelkhand	+2
Jullundur	—54	Rohilkhand	—76
		*Rest of the Province	—100
Ferozepore	+77		
Total Cis. Sutlej Territory	+10	† Total United Provinces	—36
Lahore	+30		
Rawalpindi	+45	*Bihar and Orissa	—100

* No Presses.
† Includes loose cotton received at mills.

TABLE III—*contd.*

Division or block.	Percentage excess (+) or deficit (—)	Division or block.	Percentage excess (+) or deficit (—)
Bengal	+84	Hyderabad ..	—67
Assam	—13	Mysore ..	+192
*Jubbulpore	—100	† Tinnevellies ..	—24
Nerbudda	—50	† Salems ..	—9
Nimar	+4	† Cambodias ..	+16
Nagpur	+9	† Northerns and Westerns ..	—3
Satpura	—80	† Cocanadas and others ..	+13
*Chhatisgarh ..	—100	† Total Madras ..	—4
Berar	—8	Burma ..	—60
† Total Central Provinces and Berar.	—3	† (ALL-INDIA ..	—12·6)

Supplementary Note (2).

As in last year, the Director of Agriculture, Bombay Presidency, has submitted a note which is attached in which the cotton forecasts are critically examined in the light of the information furnished by cotton press returns. The note shows the conclusions reached, and the steps proposed to be taken to remedy the defects brought to light. The Committee would, no doubt, greatly appreciate the continued efforts of the provincial authorities to improve the accuracy of their estimates.

As regards the point raised in paragraph 1 of the attached note, it may be mentioned that the following resolution passed at the last Indian Central Cotton Committee meeting was forwarded to the Government of India :—

"That the Government of India be requested to arrange for separate trade statistics for loose cotton for such trade blocks as, in the opinion of the provincial authorities responsible for the compilation of cotton forecasts, are of importance for their purposes."

This matter is now under the consideration of the Government and their decision will be communicated to the provincial authorities as soon as received.

NOTE.

Note comparing the Final Cotton Forecast outturn with the quantity actually pressed in the cotton presses of the Bombay Presidency during the season—1931–32.

For reasons already stated last time the "Raw Cotton Trade Statistics" showing the rail-borne trade in raw cotton published by the Director of Statistics, Calcutta, have not been taken into account in the present note. The reasons are briefly that these statistics do not differentiate between cotton already pressed and loose cotton. As it is only the loose cotton that usually comes in from the adjoining outside Provinces or States for pressing in the Bombay Presidency cotton presses, which makes it impossible to distinguish between the local and outside crop pressed in this Presidency ; what we require are the statistics of such loose cotton coming from outside. As these are not, however, available in the statistics published by the Director of Statistics, it has not been found possible to make use of these in the present note. As it is likely that a good deal of loose cotton comes for pressing into the Bombay Presidency both from the adjoining British Territories and the Indian States (e.g. Central Provinces and Berar and the Nizam's Dominions), it will be very desirable to have separate statistics for the loose cotton so imported for pressing and we have already suggested to the Indian Central Cotton Committee to approach the Director of Statistics with a view to publish these separately in future.

Now with regard to the accuracy of the Final Cotton Forecast for the season 1931-32 as compared with the cotton press statistics for the same year, the following is briefly the position in the different divisions in the Bombay Presidency.

* No Presses.

† Includes loose cotton received at mills.

I Gujerat.

Districts arranged according to Cotton Press Blocks.	Final Cotton Forecast—April 1932.			
	Area.	Anna valuation.	Standard yield in lbs. per acre.	Outturn.
1	2	3	4	5
	Acres.	As.	Lbs.	Bales.
Ahmedabad	325,444	9·3	125	78,921
Kaira	71,083	10·1	115	17,218
Panch Mahals	30,428	8·2	120	6,238
Broach	285,623	8·7	130	67,122
Surat	157,751	9·2	120	36,283
Total Gujerat ..	870,329	....	....	205,782

Districts arranged according to Cotton Press Blocks.	Season and Crop Report (July 1932).			Bales of cotton actually pressed up to 31st August 1932.	Bales pressed over (+) or below (—) the outturn in	
	Area.	Anna valuation.	Outturn.		Final Cotton Forecast (Column 5).	Season and Crop Report (Column 8).
1	6	7	8	9	10	11
	Acres.	As.	Bales.	Bales.	Bales.	Bales.
Ahmedabad	365,827	9·0	85,969	121,309	+42,388	+35,340
Kaira	77,068	10·4	19,267	39,702	+22,484	+20,435
Panch Mahals	31,037	8·9	6,906	6,210	— 28	— 696
Broach	301,321	6·9	56,497	142,289	+75,167	+85,792
Surat	173,331	9·2	39,866	74,765	+38,482	+34,899
Total Gujerat ..	948,584	..	208,505	384,275	+178,493	+175,770

The forecast outturn of 205,782 bales (col. 5) is short by 178,493 bales (col. 10) when compared with the bales of cotton actually pressed, viz., 384,275 bales (col. 9). It will, however, be seen from the forecast outturn of 206,000 bales (col. 5) and that arrived at from the more accurate figures reported from the Season and Crop Report in July subsequently, viz., 209,000 bales (col. 8) that there is a difference of only 3,000 between the two which works out to less than 1½ per cent. and as such may be termed negligible. In other words so far as the area and anna valuation (which are the bases of the outturn) reported for the final forecast report in April are concerned, we may say that these have been substantially correct. Now a difference of some 178,000 bales between the forecast outturn and the amount of cotton pressed, in spite of this favourable position, is not small and we have to find out an explanation in some other factor. This factor, as we have always found to be the case, is the trade figure affected by the movement of cotton passing between the British Districts of Gujerat and the Indian States which are so closely interwoven particularly in this tract. It would, therefore, be necessary to examine the forecast figures and the press figures of the adjoining Indian States,

viz., the Western India States Agency, the other Gujerat States comprising Rewa Kantha, Mahi Kantha, Cambay, etc., and the Baroda State. Now, when these figures for the States are considered side by side with those for the British Districts, we have the following position :—

	Final Cotton Forecast outturn (April 1932)	Quantity pressed since 1st September 1931 to 31st August 1932.
A. British Districts of Gujerat	205,782	384,275
B. Indian States adjoining the British territory of Gujerat :—		
(*a*) Baroda	133,673	125,927
(*b*) Western India States Agency ..	438,194	251,643
(*c*) Other Gujerat States	77,611	50,452
Total, Gujerat and Kathiawar ..	855,260	812,297

Thus, it will be seen from these figures that the final forecast outturn is higher by only some 43,000 bales than the press figures, but as this difference of only 43,000 bales in an estimate of some 855,000 bales works out to only five per cent., we may reasonably say that, so far as the Gujerat Division is concerned, our forecast has been generally accurate.

II Northern Deccan.

Districts arranged according to Cotton Press Blocks.	Final Cotton Forecast—April 1932.			
	Area.	Anna valuation.	Standard yield in lbs. per acre.	Outturn.
1	2	3	4	5
	Acres.	As.	Lbs.	Bales.
West Khandesh	400,928	7·4	110	68,158
East Khandesh	642,485	5·6	110	81,917
Nasik	93,403	7·6	100	14,711
Total, North Deccan ..	1,136,816	....	....	164,786

Districts arranged according to Cotton Press Blocks.	Season and Crop Report (July 1932).			Bales of cotton actually pressed up to 31st August 1932.	Bales pressed over (+) or below (—) the outturn in	
	Area.	Anna valuation.	Outturn.		Final Forecast (Column 5).	Season and Crop Report (Column 8).
1	6	7	8	9	10	11
	Acres.	As.	Bales.	Bales.	Bales.	Bales.
West Khandesh	438,850	7·0	70,215	63,479	— 4,679	— 6,736
East Khandesh	651,988	6·0	89,648	54,802	—27,115	—34,846
Nasik	92,805	8·0	15,544	14,869	+ 158	— 675
Total, North Deccan ..	1,183,643	..	175,407	133,150	—31,636	—42,257

The forecast in this case appears to be an overestimate as the forecast outturn of 164,786 bales (col. 5) is higher than the quantity actually pressed, viz., 133,150 bales (col. 9) by some 31,636 bales (col. 10). The forecast figures of area, however, are fairly accurate and this will be seen from the fact that the area reported subsequently from the Season and Crop Report which is 1,183,643 acres (col. 6) does not vary widely from the forecast figures of 1,136,816 acres in col. 2, the difference being only 47,000 acres or 4 per cent. The area factor thus does not seem to be the main cause of the difference. It will, however, be seen from the outturn arrived at from the Season and Crop Report figures, viz., 175,000 bales (col. 8) that it is much more than the forecast outturn (165,000 bales in col. 5) and, if anything, it (Season Report outturn in col. 8) widens the difference between the estimated outturn and the press figure in col. 9. Now as the forecast outturn in itself is much more than the press figure, it is clear that a more liberal anna valuation than the agricultural outlook justified was reported to us for the forecast by the Revenue Officers and this estimate of anna valuation on their part was even more liberal in the case of the Season and Crop Report. It hence seems necessary to invite the attention of the Commissioner, Central Division, to this point.

III East Deccan.

Districts arranged according to Cotton Press Blocks.	Final Cotton Forecast—April 1932.			
	Area.	Anna valuation.	Standard yield in lbs. per acre.	Outturn.
1	2	3	4	5
	Acres.	As.	Lbs.	Bales.
Ahmednagar	213,842	6·4	90	25,661
Sholapur	65,543	6·6	90	8,193
Bijapur	629,101	7·0	90	81,695
Total, East Deccan ..	908,486	....	....	115,549

Districts arranged according to Cotton Press Blocks.	Season and Crop Report (July 1932).			Bales of cotton actually pressed up to 31st August 1932.	Bales pressed over (+) or below (−) the outturn in	
	Area.	Anna valuation	Outturn.		Final Cotton Forecast (Col. 5).	Season and Crop Report (Col. 8).
1	6	7	8	9	10	11
	Acres.	As.	Bales.	Bales.	Bales.	Bales.
Ahmednagar	195,670	7·0	25,437	13,799	−11,862	−11,638
Sholapur	64,845	6·7	8,106	16,450	+ 8,257	+ 8,344
Bijapur	703,379	6·0	78,439	45,423	−36,272	−33,016
Total, East Deccan ..	963,894	....	111,982	75,672	−39,877	−36,310

As in the case of the North Deccan, the forecast estimate in the case of this block also seems to be an overestimate. Thus, the forecast outturn of 115,549 bales (col. 5) is higher than the amount actually pressed, viz., 75,675 bales (col. 9) by 39,877 bales (col. 10). The area reported for the Final Cotton Forecast report in April 1932, viz., 908,486 acres (col. 2) and that reported subsequently in July for the Season and Crop Report, viz., 963,894 acres (col. 6) are nearly the same, difference being only of 55,408 acres which does not seem considerable as it amounts to only about 6 per cent. and hence need not be taken into account. An examination of the remaining factor governing the outturn, viz., the

anna valuation reported both for the Final Forecast report and the Season and Crop Report will show that they also do not differ widely from each other as is evinced from the nearly same quantitative outturns arrived at in both the cases, viz., 115,000 bales (col. 5) of the forecast outturn and 112,000 bales (col. 8) of the Season and Crop Report. But as both these (the Forecast report and the Season and Crop Report) outturns are considerably higher than the press figures, the only explanation is that the Revenue authorities overestimated the anna valuation of the cotton crop in both cases and it appears necessary to invite the attention of the Commissioner, Central Division, to this point.

IV West Deccan.

Districts arranged according to Cotton Press Blocks.	Final Cotton Forecast—April 1932.			
	Area.	Anna valuation.	Standard yield in lbs. per acre.	Outturn.
1	2	3	4	5
	Acres.	As.	Lbs.	Bales.
Poona	9,229	6·8	90	1,177
Satara	13,257	9·0	90	2,221
Belgaum	253,728	7·3	100	38,693
Dharwar	634,231	7·3	120	115,745
Total, West Deccan and Southern Maratha Country..	910,445	....	....	157,836

Districts arranged according to Cotton Press Blocks.	Season and Crop Report (July 1932).			Bales of cotton actually pressed up to 31st August 1932.	Bales actually pressed over (+) or below (—) the outturn in	
	Area.	Anna valuation.	Outturn.		Final Cotton Forecast (Col. 5).	Season and Crop Report (Col. 8).
1	6	7	8	9	10	11
	Acres.	As.	Bales.	Bales.	Bales.	Bales.
Poona	16,006	5·0	1,480	4,626	+ 3,449	+ 3,146
Satara	15,369	9·0	2,574	..	— 2,221	— 2,574
Belgaum	303,033	7·0	43,989	43,576	+ 4,883	— 363
Dharwar	634,011	7·0	110,951	85,447	—30,298	—25,504
Total, West Deccan and Southern Maratha Country..	968,419	....	158,944	133,649	—24,187	—25,295

Curious enough, just as in the case of the two blocks, viz., the North Deccan and the East Deccan dealt with above, the forecast outturn of 157,836 bales (col. 5) in this block also is higher than the amount actually pressed, viz., 133,649 bales (col. 9) by 24,187 bales (col. 10). Now, a comparison of the area figures reported for the Final Cotton Forecast report in April, viz., 910,445 acres (col. 2) with those reported subsequently for the Season and Crop Report in July, viz., 968,419 acres (col. 6) will show that the difference of some 58,000 acres is not very serious amounting as it does to only some six per cent. Besides, this difference in the forecast area seems to have been subsequently offset by a

smaller anna valuation reported for the Season and Crop Report, as will be seen from the fact that the outturn worked out on the forecast figures (158,000 bales in col. 5) and the Season and Crop Report figures (159,000 bales in col. 8) is almost the same. As the Forecast and the Season and Crop Report outturns are, however, both higher by some 24 or 25 thousand bales (cols. 10 and 11) over the press figure of 134,000 bales (col. 9), the only explanation is that the Revenue Officers reported a higher anna valuation both for the Final Cotton Forecast and the Season and Crop Report during the year and it seems desirable to solicit the attention of the Commissioners concerned to this point.

V Sind.

Districts arranged according to Cotton Press Blocks.	Final Cotton Forecast—April 1932.			
	Area.	Anna valuation.	Standard yield in lbs. per acre.	Outturn.
1	2	3	4	5
	Acres.	As.	Lbs.	Bales.
Hyderabad	44,498	9·0	198	16,465
Thar Parkar	123,861	7·0	160	42,604
Nawabshah	77,541	8·0	200	24,101
Other Sind Districts ..	800	9·0	181	272
Total, Sind ..	246,700	....	....	83,442

Districts arranged according to Cotton Press Blocks.	Season and Crop Report (July 1932).			Bales of cotton actually pressed up to 31st August 1932.	Bales pressed over (+) or below (−) the outturn in	
	Area.	Anna valuation.	Outturn.		Final Cotton Forecast (Col. 5).	Season and Crop Report (Col. 8).
1	6	7	8	9	10	11
	Acres.	As.	Bales.	Bales.	Bales.	Bales.
Hyderabad	49,662	8·0	16,387	31,032	+14,567	+14,645
Thar Parkar	124,725	6·0	33,364	23,145	—19,459	—10,219
Nawabshah	80,991	7·0	23,690	51,703	+27,602	+28,013
Other Sind Districts ..	970	8·0	291	7,160	+ 6,888	+ 6,869
Total, Sind ..	256,348	....	73,732	113,040	+29,598	+39,308

The forecast outturn of 83,442 bales (col. 5) is short of the amount actually pressed, viz., 113,040 bales (col. 9) by as much as 29,598 bales (col. 10) in spite of the fact that the forecast outturn of 83,442 bales (col. 5) is higher than the outturn worked out for the Season and Crop Report of 73,732 bales (col. 8) by 9,710 bales which means that, if anything, the forecast figure is the nearer to the facts. The area figure reported for the forecast, viz., 247,000 acres (col. 2) may be said to compare favourably with that reported for the Season and Crop Report, viz., 256,000 acres (col. 6), as the difference between the two of some 9,000 acres does not amount even to four per cent. The anna valuation reported for the Season and Crop Report is, however, on the whole, lower than that reported for the forecast with the result that the outturn arrived at from the Season and Crop Report figures is lower by some 10,000 bales than that arrived at from the forecast figures. In consequence, the difference between the Season and Crop Report outturn (74,000 bales, col. 8) and the press figure (113,000 bales, col. 9) is some 39,000 bales, as

against a difference of 29,000 bales between the forecast outturn and the press figure. In other words, while the anna valuation reported for the forecast is somewhat better than that reported for the Season and Crop Report, it is still very short of what it should have been to give an outturn approaching the press figures and if approved the attention of the Commissioner in Sind may be invited to the underestimate in the anna valuation of the cotton crop in the Province during the year 1931–32.

In short, while our Gujerat forecast has been substantially accurate, there has been definitely an overestimate in the case of the North Deccan, East Deccan and West Deccan and an underestimate in the case of Sind. This over or underestimate does not, however, appear to be due to any inaccuracy in the area figures reported for the forecast, as these have been generally confirmed by the actual area figures reported ultimately for the Season and Crop Report. The main cause of the difference, hence, appears to be an overestimate of the anna valuation in the case of the Deccan and Karnatak (which cover the three blocks, North Deccan, East Deccan and West Deccan) and an underestimate of the same in the case of Sind. In other words, it appears to be the case that probably the ill effects of the excessive rains in the North Deccan, of their uneven distribution in the South Deccan and of the unfavourable winds and red leaf disease in the Karnatak (referred to by us in the preultimate forecast report on cotton) were not realised to the full extent by the Revenue Officers, while reporting to us the anna valuation of the crop for our last forecast report. On the other hand, in Sind, what small damage might have been caused to the cotton crop by the hot winds, boll worms, etc., was probably over-emphasised by the Reporting Officers thus resulting in their estimating a comparatively lower anna valuation for the crop.

Supplementary Note (3).

The attached letter and enclosure from the Director General of Commercial Intelligence and Statistics, Calcutta, are for information.

Copy of letter No. 1134, *dated the* 24*th January* 1933, *from the Director General of Commercial Intelligence and Statistics, Calcutta, to the Secretary, Indian Central Cotton Committee.*

I have the honour to enclose herewith a memo containing my remarks on the calculation made in your note on Subject 13—Cotton Statistics, Comparison of Cotton Press Returns with Cotton Forecasts.

With regard to the remarks on the application of Stuart's method contained in paragraph 6 of your note referred to above, I may point out that even if it were possible to compute the "actual" crop correctly it would be difficult in practice to locate the errors as both the standard yield and condition factor are known to be inaccurate. The latter is known to be particularly so, as will be apparent from the concluding sentence of resolution IX of the Board of Agriculture, 1924.

MEMORANDUM.

Remarks of the Director General of Commercial Intelligence and Statistics, on the calculations made in Enclosures 1, 2 *and* 3 *to the Secretary's note on Subject* 13—*Cotton Statistics, Comparison of Cotton Press Returns with Cotton Forecasts.*

(1) For a satisfactory examination of the position, due allowance should be made in the calculation for "stocks" and "extra-factory" consumption. Accurate data for these two items are not available at present, but attempts should be made to include at least fairly accurate estimates for them, if the calculation is to serve its object properly.

(2) Due consideration should be given to bale weights. The different sets of statistics are reported in bales of varying weight, and it is necessary to express them all in bales of uniform weight, say, statistical bales of 400 lbs. each.

In the case of Bombay, the figures shown in column 3 on page 67 and column 9 on page 74 are defective inasmuch as they were arrived at by adding the press figures which are in bales of 392 lbs. to those of loose cotton in terms of bales of 400 lbs. each.

Similarly in the case of Assam, the pressing figures as shown in column 9 on page 74 would, if converted into bales of 400 lbs. each, be reduced to less than half of what it is.

(3) In the examination of the position relating to maritime provinces by means of raw cotton trade statistics, it seems necessary to consider imports by sea, as the raw cotton trade statistics do not distinguish between Indian and foreign cotton.

(4) In the case of Madras, the figure shown in column 8 on page 74 does not seem to be comparable with the forecast estimates for the province shown in column 10. The former figure refers to the period from 1st September 1931 to 31st August 1932 which includes two crop seasons 1930-31 and 1931-32.

(5) There are certain defects in the compilation due to faulty rounding. The "indicated production"* for Central India as shown in the last column on page 72 should perhaps be 184,617 as shown in column 8 on page 74.

APPENDIX XII.

SUBJECT 14.—*Cotton Ginning and Pressing Factories Act—Progress made in Indian States.*

Secretary's Note.

Since the last meeting of the Committee the following further information has been received regarding the progress made in Indian States in the introduction of legislation on the lines of the Indian Cotton Ginning and Pressing Factories Act and Rules.

Cutch State.—The Darbar has framed a set of Cotton Ginning and Pressing Factories Rules for a period of two years which came into force on the 1st May 1932. Cotton Press Returns are being received.

Kishangarh State.—The Darbar has framed a set of Cotton Ginning and Pressing Factories Rules. These came into force on the 1st September 1932 and Cotton Press Returns are being received.

The present position is that 63 States have now enacted legislation on the lines of the British India Act and 59 States supply weekly cotton press returns.

APPENDIX XIII.

SUBJECT 15.—*Cotton Ginning and Pressing Factories Pools—Replies from Local Governments.*

Secretary's Note.

At its meeting held on the 7th December 1931, the Local Sub-Committee considered the reports of investigations carried out in the Bombay Presidency, Central Provinces and Ajmer-Merwara into the effect of pools of cotton ginning and pressing factories on the price paid to the grower for his cotton and decided to draw the attention of the Local Governments concerned to the reports and to request them to take any action they thought necessary to prevent the grower being penalised by a combine of factory owners. This decision was adopted by the Indian Central Cotton Committee in December 1931.

A copy of the report of the Local Sub-Committee together with the reports of the investigations was sent to the three Local Governments concerned for such action as they deemed necessary. From the attached replies† received from them it will be seen that they have decided not to take any action.

APPENDIX XIV.

SUBJECT 16.—*Summary of Proceedings of the Local Sub-Committee.*

Secretary's Note.

Since the last meeting of the Committee in August 1932, three meetings of the Local Sub-Committee have been held. The place of Mr. D. McCallum on the Sub-Committee was taken by Mr. J. O. G. Barnes who succeeded him on the Committee.

2. In response to the agitation set up by the mill industry in Indore, the Durbar of the Holkar State amended in December 1931 the Indore Cotton Transport Act restricting its application to the import of *Deshi* Mewadi cotton only. This amendment was considered in the first instance by the Local Sub-Committee in July 1932 when it was decided that the subject should be discussed with Mr. Palairet before it was brought to the notice

*Since corrected. † Not printed.

of the Indore Government. The President subsequently took the opportunity of his visit to Indore in September last to discuss the matter with Mr. Palairet who has since explained in writing the need for the step taken by the Indore Government. The Sub-Committee considered his explanation and decided to put off further consideration of the subject till definite information was obtained from the Volkart and Ralli Agencies in Central India on the working of the Cotton Transport Act in Indore.

3. As decided by the Cotton Ginning and Pressing Factories Sub-Committee in February last, a detailed note, giving all the available information in favour of licensing the cotton ginning and pressing factories, was circulated to all the trade associations represented on the Committee for their opinion. The replies received were considered by the Local Sub-Committee which decided that, in view of the uncertainty of any measure of this nature being passed in the present Legislative Assembly, the subject should be postponed till the next monsoon meeting or until such time as any member put up a concrete scheme.

4. The Sub-Committee decided to discontinue the half yearly reports from the Director of Agriculture, Bombay Presidency, on the imports of cotton slivers into the protected areas, in view of the fact that the quantity of slivers imported was negligible.

5. The Sub-Committee considered an invitation received from Mr. B. A. Collins, Director-General and Secretary to Government, Department of Commerce and Industry, His Exalted Highness the Nizam's Government, Hyderabad-Deccan, to visit the Nanded Cotton Market and decided to announce the invitation at this meeting of the full Committee, so that any member desiring to gain firsthand knowledge of the market might avail himself of the opportunity. This subject is dealt with separately on the Agenda of the full Committee (Item No. 21).

6. The Sub-Committee considered a letter from the Karachi Joint Cotton Committee suggesting the desirability of introducing the Bengal maund of 82⅔ lbs. as the basic weight for cotton rates in all the organised cotton markets in India, particularly in Bombay and Karachi, and decided that no steps need be taken in the matter till the Bill to fix a scale of the standard weights and measures for the Presidency of Bombay, which was then under the consideration of the Bombay Legislative Council, was published. The Bill has since been passed. This forms a separate subject on the Agenda of the full Committee (Item No. 43).

7. The Sub-Committee at several of its meetings since August 1931 considered the incidence of the license fees in the Berar Cotton Markets under the revised rules of the Berar Cotton and Grain Markets Law and, finally, decided that no action should be taken by the Committee till the revised rules were given a fair trial for at least one year, and that the Local Governments should be requested to afford the Committee an opportunity of expressing an opinion before the rates were fixed for the ensuing year. The Committee was accordingly asked by the Central Provinces Government for an expression of opinion on the suitability or otherwise of the license fees of Rs. 200 to Rs. 400 in the first class markets and Rs. 100 to Rs. 200 in the second class markets, levied in the Berar Markets. Considering these rates very high the Sub-Committee recommended that the maximum rates should be fixed at Rs. 100 in the first class markets and Rs. 50 in the second class markets.

8. The Sub-Committee considered a letter from a Bombay Firm suggesting drastic measures to prohibit the grower from sowing Goghari cotton in the Surat-Navsari and Ankleshwar-Rajpipla protected zones. The Sub-Committee decided that this subject should be put off to some future date so that it could be considered along with the subject of licensing ginneries and presses.

9. The Sub-Committee considered a report from the Chief Inspector of Factories, Central Provinces, stating that in view of the amendment of Rule 7 of the Cotton Ginning and Pressing Factories Rules having allowed stencilling in ink the press mark and serial number on the lashed side of the bale, which in course of time caused the ink to fade away or the hessian to be torn off, thus rendering the original marks indecipherable. the Factory owners could not be held responsible. The Sub-Committee therefore referred the subject to Mr. S. D. Saklatvala and the Committee's Solicitors both of whom have replied that the Chief Inspector's interpretation of the Rule was incorrect and that the ink and the hessian should be of such quality that they may enable the marks on bales to be decipherable at the time of survey. The Sub-Committee considered these views and decided that copies of the Solicitors' letter should be sent to the East India Cotton Association and the Director of Industries, Central Provinces, for information.

10. At the instance of Mr. M. P. Kolhe, the Standing Finance Sub-Committee considered the question of income tax levied on the cotton grower for ginning cotton and decided to request the Government of India to exempt the grower from the tax when he

ginned his own cotton. The Local Sub-Committee considered the Government reply regretting their inability to comply with the Committee's request and decided that the President should be requested to interview the Finance Member regarding this matter.

11. The Sub-Committee considered a report from the Madras Government to the effect that the officer appointed in March 1931 for the development of Cotton Sale Societies in the principal cotton areas of the Madras Presidency was not able to do much useful work and that the appointment was abolished as a measure of retrenchment. The Sub-Committee viewed the action of the Madras Government with disappointment in failing to organise co-operative sale societies which were considered of very great importance by the Committee and decided to convey to them its feeling in the matter.

12. In pursuance of the resolution passed at its 23rd meeting held in July 1931, the Indian Central Cotton Committee requested the Government of India to transfer to the Committee the work of compilation and publication of All-India Cotton Forecasts. The Government's reply thereon regretting inability to accept the Committee's proposal was considered by the Committee in August last when it was decided that the Secretary should obtain the views of individual members and place them before the Local Sub-Committee for preparing a well considered memorandum. The Sub-Committee considered the views of members together with a note put up by the Secretary in which he had suggested the appointment of a Forecast Sub-Committee consisting of Directors of Agriculture and other officers who are at present responsible for cotton statistics, and decided that a draft memorandum should be prepared on the lines suggested in the Secretary's note for the consideration of the full Committee at this meeting.

13. The Sub-Committee considered a letter from Mr. F. R. Daboo, Zamindar and Contractor, Navsari, requesting the Committee to pass a resolution condemning the practice of unauthorized deductions on the sale of full pressed cotton at Surat. The Sub-Committee decided that this question should be brought in at its next meeting after ascertaining from the East India Cotton Association the practice in the Bombay market including the mill terms.

14. The Sub-Committee considered the question of implementing Article 8 of the Ottawa Agreement which reads as follows :—

"His Majesty's Government in the United Kingdom undertake that they will co-operate in any practicable scheme that may be agreed between the manufacturing, trading and producing interests in the United Kingdom and India for promoting, whether by research, propaganda or improved marketing, the greater use of Indian cotton in the United Kingdom."

The Sub-Committee decided that this subject should be referred to the full Committee (Item No. 44).

APPENDIX XV.

SUBJECT 17.—*Proposal for the formation of a Cotton Association at Karachi.*

Secretary's Note.

The following note and draft resolution regarding the formation of a Cotton Association in Karachi, received from Mr. G. B. Kotak, are for consideration.

The system of cotton marketing in Karachi received the earnest consideration of the Committee more than once in the past and at its 17th meeting held in July 1928, when considering the progress achieved, the Committee passed the following resolution :—

"The Central Cotton Committee note with great satisfaction the strides that have been made with regard to the organisation of the cotton market in Karachi. The widening of the panel of arbitrators so as to include representatives of the Indian Merchants' Association, the formation of an Appeal Committee and the more satisfactory arrangement regarding forward contracts are three most important advances. The Committee earnestly hope that the Karachi Joint Cotton Committee will develop at an early date into an Association similar to the East India Cotton Association, Bombay."

The attached copy* of the Joint Cotton Committee's report gives a brief history of its origin and of its activities up-to-date.

Note by Mr. G. B. Kotak.

Since the next session of the Committee is to be held at Karachi, I wish the occasion might be utilised to give impetus to the scheme for forming a Cotton Association in Karachi similar to the East India Cotton Association.

* Not printed.

It was contemplated at the very inception of the Karachi Joint Cotton Committee to organise in course of time a cotton market on the lines of Bombay. As early as July 1928, Karachi Joint Cotton Committee declared that "It is the Karachi Joint Cotton Committee's intention to prepare the ground gradually for the establishment by charter of an Association as well as of a Clearing House on the lines of those in Bombay. This preparatory work should not occupy more than two years." Karachi Joint Cotton Committee has worked for full five years now and has worked well, of course, within the limitations which were innate to it. But it has now come to a stage when further progress is not possible in its present position. It is time to take the next step forward.

As you are well aware the Karachi Joint Cotton Committee is now managed jointly by the Karachi Chamber of Commerce and the Karachi Indian Merchants' Association. These two bodies, as intended of them, have to deal with all kinds of trades besides cotton. Naturally undivided attention by such parent bodies could not always be expected, Such a world-wide commodity as cotton does require a specialised institution for its growth. But I do not think anyone needs arguments in order to be convinced of this necessity. It is so obvious.

There is a little inertia on this side. But I feel confident that stimulated and supported by the Indian Central Cotton Committee in sessions at Karachi, there is every possibility of achieving the purpose of my suggestions.

A resolution on the following lines might serve the purpose :—

"That the Indian Central Cotton Committee note with satisfaction the strides that have been made with regard to the organisation of the cotton market in Karachi as is evident from the report of the Karachi Joint Cotton Committee for the period 1927-32. This Committee feel that the affairs of the Karachi Joint Cotton Committee have reached a stage at which its conversion into an independent Cotton Association seems very desirable, and earnestly desire that the Karachi Joint Cotton Committee will now take early steps to this end."

APPENDIX XVI.

SUBJECT 18.—*Appointment of a permanent representative of the Karachi Indian Merchants' Association on the Committee—Proposed Resolution by Mr. G. B. Kotak.*

Secretary's Note.

Mr. G. B. Kotak, representative of the Karachi Indian Merchants' Association, proposes to move the following resolution :—

"That this Committee recommends to the Governor-General in Council to bestow on the Karachi Indian Merchants' Association the right to send one permanent representative member on this Committee instead of the present nominated additional member."

The history of the representation of the Karachi Indian Merchants' Association on the Indian Central Cotton Committee is briefly as follows :—

Under the powers vested in the Governor-General in Council by section 4 (*xi*) of the Indian Cotton Cess Act, on the recommendation of the Committee, the Karachi Indian Merchants' Association was first given representation in 1927 for a period of two years with the stipulation that the position would be reconsidered if and when a representative Cotton Trade Association was formed in Karachi. When the position was reconsidered in December 1928 an extension of the period of representation was decided on as it was then considered too early to recommend that the Karachi Joint Cotton Committee be given separate representation. Before the subject came up for further consideration in 1930, the Karachi Joint Cotton Committee passed and forwarded a resolution to the Committee opposing the proposed withdrawal of the representation of the Karachi Indian Merchants' Association and proposing that the Joint Cotton Committee be given separate additional representation on the Indian Central Cotton Committee. This resolution was considered by the Committee at its meeting in December 1930 when the following resolution was passed :—

"That the Government of India be requested to appoint under section 4 (*xi*) of the Indian Cotton Cess Act, a member nominated by the Karachi Indian Merchants' Association for a period of three years. The representation of the Karachi Joint Cotton Committee will be considered by the Committee when this body becomes a duly constituted association."

The appointment of the Karachi Indian Merchants' Association's representative has accordingly been extended, the term of office of the present member expiring in March 1934.

The mover of the resolution now apparently desires an alteration in the present arrangement for the appointment of the Karachi Indian Merchants' Association's representative by making provision for it in the Act itself. If Mr. Kotak's proposal is accepted, an amendment will be required in the Act, the relevant portions* of which are attached.

APPENDIX XVII.

SUBJECT 19.—*Provincial Cotton Committees—Proceedings of the Punjab Provincial Cotton Committee.*

Secretary's Note.

The attached Proceedings of a meeting of the Punjab Provincial Cotton Committee held on the 12th November 1932 are for information. Subjects Nos. 1, 2, 3 and 4 are being dealt with separately by the Agricultural Research Sub-Committee whose report will be considered by the Committee in due course. Subject No. 5 has been dealt with under Subject No. 19 of the agenda of this Committee.

Proceedings of the Punjab Provincial Cotton Committee meeting held at 11 a.m. on the 12th November 1932, in the office of the Director of Agriculture, Punjab.

Present :

1. Mr. D. Milne, B.Sc. (Agr.), C.I.E., I.A.S.,
   Director of Agriculture, Punjab. *(Chairman).*
2. Mr. H. R. Stewart, I.A.S.,
   Assistant Director of Agriculture, Punjab.
3. Mr. D. P. Johnston, I.A.S.,
   Deputy Director of Agriculture, Lyallpur.
4. Khan Bahadur Maulvi Fateh-ud-Din, I.A.S.,
   Deputy Director of Agriculture, Jullunder.
5. Sardar Darshan Singh, I.A.S.,
   Deputy Director of Agriculture, Gurdaspur.
6. Khan Saheb Ch. Mohammad Abdullah, I.A.S.,
   Deputy Director of Agriculture, Hansi.
7. Agha Yusaf Ali Khan, P.A.S.,
   Deputy Director of Agriculture, Montgomery.
8. Mr. W. Roberts,
   British Cotton Growing Association, Khanew
9. Sardar Sahib Ujjal Singh, M.L.C.,
10. Khan Bahadur Nawab Fazal Ali, M.L.C.,
11. Mr. Mohammad Afzal,
    Acting Cotton Research Botanist, Lyallpur.

By invitation.

12. Col. E. H. Cole, Coleana Estate, Okara.
13. Mr. M. Afzal Husain, I.A.S.,
    Locust Research Officer, Lyallpur.
14. Dr. R. L. Chopra, M.A., Ph.D.,
    Offg. Entomologist to Government, Punjab, Lyallpur.
15. Sardar Sahib Kharak Singh, I.A.S.,
    Deputy Director of Agriculture.

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* Not printed.

A letter was received from Khan Bahadur Ahmad Yar Khan Daultana, expressing his inability to attend the meeting.

The following papers were circulated :—

Agenda.

(1) Scheme for an extension of the grant for an investigation into the Pink Boll-worm.

(2) Scheme for the investigation of Spotted Boll-worm in the Punjab.

(3) Zamindara Co-operative Sale Societies for the sale of all farm crop produce, including Punjab-American cotton on the lines of the Okara Zamindara Association.

(4) Scheme to secure a grant to enable the Agricultural Department to sell its pure cotton seed at rates more nearly approaching *bazar* rates for ordinary seed, in order to encourage the sowing of pure American seed.

(5) Adoption of universal standards for Indian cottons.

(6) Disposal of seed of long staple cotton grown in the Punjab.

(7) Any other business.

The Chairman intimated the action which had been taken on the resolutions passed at the meeting of the Committee held on 4th May 1932.

Re : Item No. 1.

Mr. Milne referred to the notes which had been circulated and which gave a review of the work done on the Pink Boll-worm Research Scheme during the extended period of the scheme.

Mr. Roberts considered that this work was not of practical importance in the Canal Colonies and that it should be confined to the south-east Punjab.

Mr. Milne stated that the Punjab by having one tract in which the Pink Boll-worm was a major pest, and another where this was not generally the case, had provided an excellent opportunity for the study of the conditions which limit the incidence of the pest. For this purpose the pest had to be studied in both tracts. The information which was being collected was of great practical value in showing whether it was or was not necessary to spend large sums of money on measures to keep this pest out of the canal colonies; also it was of value to places outside the Punjab.

Dr. Chopra said that this year's observations in some plots in canal colonies showed that the incidence of Pink Boll-worm was as high as 38 per cent. and possibly it is a greater pest than was formerly thought.

Mr. Afzal Husain stated that the work is being carried out at Rohtak and Sialkot where the pest is serious, as well as at Lyallpur. The investigations had shown that in the Punjab the seed is not the source of infection and spread, and it was essential that we should fully and finally investigate why and how it spreads and why it does not die out.

Mr. Roberts agreed that the scientific aspect was of interest, but in the present state of finances we should confine ourselves to pests which are more important, such as Jassid and White-fly, and investigate them in the tracts where they are important.

He was informed in reply that where the pest is serious, laboratories are actually located and staff posted to work during the full cotton season.

Mr. Milne felt that the scheme had already given results of much value and that further results of value were likely to be obtained. Therefore, that the scheme should be continued.

Mr. Roberts said that he was against an indefinite continuance of the work.

Mr. Roberts and Sardar Sahib Ujjal Singh thought that the scheme should definitely be completed in the period of three years now proposed.

Khan Bahadur Nawab Fazal Ali said that scientific work could never be said to be finally completed. Mr. Milne agreed and said that in his opinion the scheme should be continued for three years and if at the end of that time results of sufficient value were not being got it should be closed down.

Finally the Committee resolved (Mr. Roberts dissenting) that the scheme as it stands be recommended to the Indian Central Cotton Committee for favourable consideration.

Re: Item No. 2.

Mr. Roberts enquired whether any work had been done in the Punjab on keeping parasites in cold storage as had been done in the Sudan.

Mr. Afzal Husain said he thought they could be kept in the pupal stage, but it had not been tried.

Mr. Roberts felt that this aspect should be included in the scheme. If the number of parasites could be vastly increased at the period of severest attack it might be possible to assist in control. He suggested that information be obtained from the Sudan as to what is being done there.

With this addition the Committee approved of the scheme and resolved that it should be sent to the Indian Central Cotton Committee with their recommendation for favourable consideration.

Re: Item No. 3.

Mr. Milne referred to the papers which had been circulated. He briefly summarised the previous history of the case as follows:—

"It will be remembered that Mr. Ritchie, Secretary, Indian Central Cotton Committee, came to the Punjab in April 1930, and discussed this question very thoroughly with a number of Government officials, members of the Legislative Council, and notable zamindars at Lahore, Sargodha, Okara and Lyallpur, including Mr. Calvert, Financial Commissioner, Development, Mr. Darling, Chairman, Punjab Banking Enquiry Committee, Mr. Dodd, Registrar, Co-operative Societies, Colonels Anderson and Bruce, Captains Mumtaz Khan and Prideaux, etc., etc. The minutes of the meeting of the Committee held on 2nd June 1930 show that the whole matter was very thoroughly discussed at that time and it was agreed that the establishment of co-operative sale societies for all crop products was a useful step in an organisation for dealing with the mixing problem; also that we should endeavour to start such societies in a few places at least. It was further agreed that the Okara Zamindara Society was an excellent model. Captain Prideaux who was then running the Okara Zamindara Society was with us. He stated that in the previous year the turnover of that society was Rs. 13½ lakhs, of which cotton comprised about rupees 8 lakhs and that the remaining rupees 5½ lakhs were for wheat, oilseeds and other produce. He expressed the view that these societies can supply buyers with *kapas* of guaranteed purity, and spinners can buy direct in considerable quantities; also that these societies would usually begin by selling *kapas*; and that later they may be able to gin to order.

He drew attention to the advantages which such societies would offer to farmers and which he had put forward at that meeting, viz.:—

(1) They would sell *kapas*, wheat, oilseeds and other crop products on sample.

(2) They would keep members informed daily of the local prices, prices at Karachi and Bombay.

(3) They could in time have store rooms of their own.

(4) Sales could be made on any date chosen by farmers.

(5) The market charges of societies will be cheaper than those in the ordinary *mandi* and a premium should be got for goods of more reliable quality.

Finally at that meeting the following resolution was passed:—

"This Committee recommends that instead of organising societies for the production and marketing of pure Punjab-American cotton only, zamindara societies which will sell all farm crop produce, including Punjab-American cotton, should be started on the lines of the Okara Zamindara Association, and that the Indian Central Cotton Committee may be requested to kindly contribute up to Rs. 5,000 for one year for work in organising and starting such societies. This money will probably be utilised in paying part salaries of the organising secretaries, graders, etc. The societies will be generally supervised by the Agricultural and Co-operative Departments and their accounts will be audited."

Mr. Milne said his own view was that the zamindar does not get in the market the full value for his produce and that in these days of agricultural depression we should do all we can to get for him the maximum return. He suggested that the proposal be referred again to the Indian Central Cotton Committee drawing attention to those schemes which were not altogether exclusively for cotton and for which the Indian Central Cotton

Committee had already contributed money; for example; (*a*) the Central Provinces Scheme for Millets, Groundnuts, etc., (*b*) the Madras Cholam Scheme, (*c*) the All-India Crop Costing Scheme. He said that all crops which come in rotation with cotton have their effect on the cotton crop and he thought the selling of all farm produce in a clean state would help farmers to farm their cottons better by providing them with more money.

Sardar Sahib Ujjal Singh enquired how the money which the Indian Central Cotton Committee would contribute is to be spent. Is it, he asked, to make up any losses which may occur; or to be spent on organising co-operative societies, or is it going to be the whole capital of the societies which might be set up?

Mr. Milne drew attention to the proceedings of the meeting above referred to, and said that it was intended to pay part of the salary of the staff for the first two or three years. In his opinion one of the important obstacles to the starting of these societies is the fact that individual farmers are loth to take the initiative and the risk of facing a deficit at the end of the year. But, if Government will give a helping hand to organise and start them and if some help in the payment of working expenses is forthcoming till they can stand on their own legs, they would continue. He felt that if a number of such societies could be started they would help to create a public desire for better grading and marketing. His intention was to help farmers to help themselves.

Sardar Sahib Ujjal Singh asked where was the capital to come from and how would the societies be financed.

Mr. Milne said the societies themselves would have to arrange for this capital.

Colonel Cole read out a note (attached) which gave his views on what is required. He supported the general idea of sale societies for all crop produce, but wished to advocate the formation of a Central Agency in Lahore whose sole business it would be to obtain rates of *produce* in distant parts of India, Central India, Southern India, East India or United Provinces, railway freights, etc., and disseminate this information on demand by such societies.

Mr. Milne thought that the Imperial Council of Agricultural Research might be able to take up such work for all India.

Mr. Roberts said that something like the Sugar Bureau seemed to be what is aimed at. He thought that to get such information a big and costly organisation and staff were required. Information would have to be collected and disseminated by wire.

Mr. Milne thought we should start with only one or two societies. In his opinion Sargodha and Lyallpur offered hopes of success.

Mr. Roberts proposed that if the Punjab Government agree to contribute an equal amount, the Indian Central Cotton Committee be asked to assist in the financing of one or two societies to deal with the sale of all crops, such finance being utilised toward paying part salary of the staff of these societies.

Maulvi Fateh-ud-Din seconded this proposal.

Colonel Cole and Mr. Roberts thought that grading should be omitted for the present. They were of opinion that little could be done in one year and they suggested that the Committee should ask for financial assistance for three years.

Colonel Cole wished to emphasise again the necessity of a Central Bureau for information on rates.

Mr. Milne thought the Imperial Council of Agricultural Research might be able to arrange for the collection and dissemination of such information.

After discussion the following resolution was passed unanimously:—

"This Committee would draw the attention of the Indian Central Cotton Committee to the resolution of this Committee passed in June 1930 to the effect that Zamindara Societies which will sell all farm produce, including Punjab-American cottons, should be started on the lines of the Okara Zamindara Association, and that the Indian Central Cotton Committee be requested to kindly contribute up to Rs. 5,000 per annum for three years for work in starting such Societies. This money will be utilized in paying part salaries of the staff. The Societies will be generally supervised by the Agricultural and Co-operative Departments and their accounts will be audited. It is proposed to start not more than two Societies in the first year."

It was further resolved "that the Imperial Council of Agricultural Research be requested to consider the advisability of starting a Bureau of Information which would publish prices in the press and supply such information as may be asked for by the Societies under discussion."

Re : Item No. 4.

It was explained that cotton seed was usually sold by the Agricultural Department at about Re. 1 per *maund* above market rates and even then there had been losses in the cotton seed transactions in past years.

Sardar Sahib Ujjal Singh thought this a very important proposal. The premium now asked for pure seed undoubtedly deters many zamindars from buying pure seed and if we could sell pure seed at rates nearer ordinary *bazar* rates it would help considerably in the spread of pure seed.

Mr. Roberts agreed with this view.

All members felt that it was desirable to charge some premium for departmental seed, but if we could reduce the rate by about eight annas a *maund* it would help greatly to increase the area of cotton grown from improved seeds.

The Committee unanimously resolved to repeat the request to the Indian Central Cotton Committee for a grant of Rs. 25,000 per annum for two years to enable the Department to sell its pure seed at rates more nearly to bazar rates for ordinary seed.

Re : Item No. 5.

Mr. Milne said the subject could be divided into two heads :—

(*a*) whether universal standards were desirable, and
(*b*) who should take in hand the work of bringing these into existence.

After some discussion the Committee unanimously passed the following resolution :—

"This Committee heartily agrees regarding the desirability of having universal standards but recommends that to start with efforts be confined, if necessary, to introducing standards for all India, this sphere to be extended as opportunity arises. It further recommends that the Indian Central Cotton Committee should take the work in hand, the first step being the formation of a special committee including cotton growers, traders, representatives of the Government of India and of local Governments to decide on the standards required to draw up specifications and finally to make the standards."

Re : Item No. 6.

Mr. Milne gave a précis of the attempts made by the Agricultural Department to get a satisfactory defibrating machine. Briefly it showed that the Agricultural Department had been interested in discovering a satisfactory delinting machine since about 1925 and had been in correspondence with the Murray Company of Atlanta, Georgia, United States of America; Marshall Sons & Co., Ltd., Bombay, Volkart Brothers, Platt Brothers, Messrs. Greaves Cotton & Co., Messrs. Rose, Downs and Thomson of Hull; Mr. de Segundo; H. E. H. the Nizam's Mint Workshop, Hyderabad, and others in this connection. The Department was asked to send three tons of 4F cotton seed to a firm in Bolton, Lancashire. 81 *maunds* of 4F seed were purchased from the British Cotton Growing Association, Khanewal, and were despatched to the firm in question. The firm paid the Department for the seed but the Department heard nothing more thereafter. H. E. H. the Nizam's Mint Workshop informed the Department in November 1930 that they were in communication with the British Cotton Growing Association, Khanewal, in connection with the machine which they had invented and that the British Cotton Growing Association had sent a bag of 289F cotton seed for treatment.

Mr. Roberts stated that the tests were not altogether satisfactory as they were made in the absence of a proper authority. Many of the seeds were broken and there was a loss of weight of about 33 per cent. He is of opinion that defibrating is very expensive according to his information and that a machine of this type would be a special saw ginning machine with very fine saws which may be expected to remove, say, 2/3rds of the fuzz and leave the seeds very much in the state of 4F seed.

Mr. Milne thought that more work should be done on the relative feeding values of fuzzy and naked seeds and suggested that the Agricultural Chemist, Lyallpur, should take up this work.

Colonel Cole and *Mr. Roberts* strongly supported this view.

Mr. Milne read extracts from the Agricultural Chemist's report of July 1931 on his feeding trials with fuzzy seed.

The Cotton Research Botanist felt that the trials made were extensive and conclusive, as regards the question of whether fuzzy seeds are, or are not, harmful if fed to cattle, but more work needed to be done as regards heat calories and relative food values of fuzzy and naked seeds.

Finally, it was decided that the feeding values of fuzzy and naked seeds be further investigated by the Agricultural Chemist and also that further particulars regarding defibrating machines be obtained from manufacturers, with a view to submitting to the Indian Central Cotton Committee a scheme to purchase and test the value of the defibrated cotton seed.

Miscellaneous.

Nawab Fazl Ali brought before the meeting a point regarding the water supply on the Upper Jhelum Canal. He said that the canal authorities have begun giving ⅓rd water during *kharif* and ⅔rds in *Rabi*. He thought that this was not a practicable ratio of distribution of supplies. Also it will not only hamper the spread of the cotton crop but has even spoiled the cotton crop this year. He requested that representation should be made to the Irrigation Department to rectify the position very early.

It was decided to draw the attention of Government to the Nawab Sahib's remarks.

Note by Col. E. H. Cole, Coleana Estate, Okara.

Selling Societies.

In my opinion the suggestion to organise societies for production and sale of cotton alone in the Punjab is not desirable or possible. It is very necessary to attempt to evolve methods of sale for our produce, and cotton is only one of them, and for reasons which I put forward later cotton is rather easier to deal with than wheat, sugar, and other produce, which are just as valuable. Speaking first of cotton, I consider that one of the best acts of the Agricultural Department was to institute the cotton auctions some 12 years ago, this attracted the buyers to our good types of cotton and brought buyers and sellers together. Since those days many ginning mills have started in cotton centres in the Punjab and the position has somewhat changed. Punjab 4F and 289F are recognised as definite types, but the quality of both varies from year to year and from place to place.

The time of these State aided auctions is now passed and the growers must learn to stand on their own feet but I consider that guidance is still required for the mass of producers, if we are to maintain our reputation in the Punjab as producers of high grade cotton. The best way to give this guidance will be the establishment of societies for the production and marketing of Punjab produce.

Spinners require cotton of a fairly definite grade in bulk which under present conditions is hard to obtain, and the ginning mills to meet the bulk requirements of the spinners have to mix to get that quality. I feel, that if we could only induce large growers and societies to grow for quality and have that graded and offered for sale in bulk in centres, we might get better prices. At present it is not worth while for spinners to give premiums for small quantities of *kapas*. If a lot of 50,000 *maunds* was available in a centre then attention would be attracted and more favourable terms offered. I had one mill manager who came along last year and said he was prepared to buy 20,000 bales of a grade I offered him. My outturn was about 600 bales. When the buyer for this firm came he offered me Re. 1 a *maund* less than I could obtain locally. If 10,000 bales had been available I think a better price would have been offered. There is a strong feeling that spinners will not pay for good grades but I consider that if these grades are available in bulk the premiums will be forthcoming. Spinning machinery is adapted to certain grades and ginning mills are at present forced to mix to supply the grade.

Okara Zamindara Co-operative Society.

In our Society we obtain daily cotton rates from Bombay and can fairly well work out values. If we could sell in bulk and obtain a certificate of grade we might get better prices. In this the cotton market differs from that of general produce because rates are fairly well known. Provided bulk was available in one centre a properly qualified grader might be an advantage and auctions might be held. On the other hand it may well be said that provided bulk is available the market will grade for itself and pay for what it wants. The marketing of cotton is therefore on a different basis but it must be understood that no society could exist on the sales of cotton alone.

Central Bureau.

I maintain that the market for the bulk of our produce in the Punjab lies for the present in India.

It is difficult, almost impossible, at present for a local Co-operative Society to get prices and touch with distant parts of India. I, therefore, wish to advocate the formation of a Central Agency in Lahore, whose sole business it would be to obtain rates of produce in distant parts of India, Central India, South India, East India, United Provinces, such an agency to be maintained by co-operative societies with such financial assistance as

Government may give. Supplying rates of produce to Societies—having freight worked out to different main stations in India. We cannot at present hope to attain to that highly organised state which exists in industries in other countries, where each industry is kept in touch with its special markets and prices from day to day, by a Central Organisation financed by the industry. We are far from this ideal at present but until the Co-operative Societies in India realise the necessity of keeping in close touch with their markets no real progress can be looked for. At present they are in the hands of the local *Arti*. It cannot be denied that what has been found necessary in the interest of the producers in the other countries applies to the producers in the Punjab. The producer everywhere is endeavouring to free himself from the shackles of the middlemen, to shorten the steps between his factory or field and the ultimate buyer and the first stage in this process must be information of market and prices outside the local market or *Mandi*.

It is no use forming societies and then leaving them at the mercy of the local market. As an example of this I may mention that when our society was first started prices for *kapas* in comparison with baled cotton ruled low. We therefore hired a ginning mill, ginned and baled our cotton and sold in Bombay or Liverpool at favourable rates. The disadvantage was the delay in getting cash but our brokers gave us advance up to, I think, 75 per cent. of value directly bales reached Bombay, and it showed that we were independent of the local market. I mention this simply to show necessity of open markets.

Since those days local rates have improved and I think our independence had something to say to it.

The local *Arti* is a very useful person and there is no reason why he should not be made more use of. At present the good *Arti* knows what is going on in distant markets. A society only knows the local rates so it is a one sided deal. I am now speaking of wheat and general farm produce excluding cotton. Shortly we shall have to face the question of marketing sugar. If a society had some Central Agency from which it could obtain information of prices ruling in Central India, East India, Southern India and United Provinces it could get its *Arti* to put through a deal. In any case such a Society would be in a better position to get a favourable price than at present where it is working in the dark.

Undoubtedly the best incentive to any improvement in the produce of a country is the price obtained for that produce. Without an attractive return, propaganda or Government assistance is useless. The Punjab can produce good material. Let us first find a good market for our staple products and increase the production of such products and a better grade will follow.

At the moment we are in danger of losing the markets created in past years through the assistance of the Agricultural Department and every endeavour should be made to stop this tendency. Admittedly much more than this will be required but it is essential to make a start and not be deterred by anticipating difficulties. No co-operative movement can succeed without the will on the part of its members to co-operate. In a healthy society the only assistance which Government should be called upon to supply is an audit of accounts and a very efficient Central Bureau to circulate information.

In conclusion I would again support the suggestion to start selling societies if possible in combination with a Central Bureau at Lahore to circulate information.

If it is found impossible to start these selling societies then at least a start should be made with the Central Bureau to help existing societies. As a further step towards lessening cost I suggest taking advantage of an organisation which already exists for circulating trade information—the N. I. C. C.

APPENDIX XVIII.

SUBJECT 20.—*Provincial Cotton Committees—Co-operation between the Indian Central Cotton Committee and Provincial Cotton Committees—Replies from Local Governments.*

Secretary's Note.

The Indian Central Cotton Committee at its last meeting decided that the attention of Local Governments be drawn to the advisability of members of the Committee being members also of Provincial Cotton Committees in their respective provinces. Accordingly

the Local Governments of the Bombay Presidency, Central Provinces, Madras Presidency, United Provinces, Bengal and the Punjab were addressed. Replies have been received from all the Governments and they are attached for information.

Copy of letter No. 9667-A/28, dated the 29th November 1932, from the Acting Secretary to the Government of Bombay, Revenue Department, to the Secretary, Indian Central Cotton Committee.

SUBJECT.—*Provincial Cotton Committee—Co-operation between Indian Central Cotton Committee and —*

With reference to your letter, Cir. No. 351, dated 20th September 1932, on the subject noted above, I am directed by the Government of Bombay (Transferred Departments), to state that so far as the Presidency proper is concerned, no Provincial Cotton Committee has been constituted. Adequate representation has however been provided for cotton interests on the Divisional Boards of Agriculture. Two of the non-official members of the Indian Central Cotton Committee, viz. Rao Bahadur B. R. Naik and Rao Saheb C. S. Shirahatti are members of the Divisional Boards of Agriculture, Gujerat and Southern Mahratta Country. The Government of Bombay are not in favour of appointing any one of the other gentlemen mentioned in your letter on these Boards. Messrs. Ghulam Muhammad Khan and G. B. Kotak are already members of the Sind Cotton Committee, in addition to the Chief Agricultural Officer in Sind, and Government of Bombay consider that this representation of cotton interests on the Sind Committee is sufficient.

Copy of letter No. 1026/753-XIV, dated the 5th October 1932, from the Under Secretary to Government, Central Provinces, Agriculture Department, Nagpur, to the Secretary, Indian Central Cotton Committee.

SUBJECT.—*Co-operation between the Indian Central Cotton Committee and Provincial Cotton Committee.*

With reference to your letter No. 351, dated the 20th September 1932, on the above subject, I am directed by the Government of the Central Provinces (Ministry of Agriculture) to say that the principle enunciated in your letter under reference is already being followed in this province as out of the 6 members mentioned therein 5 are already members of the Cotton Committee constituted for this province.

Copy of letter No. 4204 III/32-2, dated the 3rd December 1932, from the Secretary to the Government of Madras, Development Department, to the Secretary, Indian Central Cotton Committee.

INDIAN CENTRAL COTTON COMMITTEE AND PROVINCIAL COTTON COMMITTEES—CO-OPERATION—REFERENCE YOUR LETTER NO. 351, DATED THE 20TH SEPTEMBER 1932.

I am directed to state that in this Presidency four out of the five members of the Indian Central Cotton Committee are members of the Provincial Cotton Committee. Though the local Government consider that four common members are enough to provide for co-operation between the two Committees, the question of appointing a fifth member on the Provincial Cotton Committee will be considered when the present Committee is reconstituted which will be done shortly.

Copy of letter No. 708-A/XII-A-73, dated the 27th October 1932, from the Secretary to Government, United Provinces, Agriculture Department, to the Secretary, Indian Central Cotton Committee.

PROVINCIAL COTTON COMMITTEES—CO-OPERATION BETWEEN THE INDIAN CENTRAL COTTON COMMITTEE AND PROVINCIAL COTTON COMMITTEES.

With reference to your letter Cir. No. 351, dated September 20, 1932, I am directed to refer to this Government's letter No. 30, dated January 22, 1932, and to say that your Committee's decision on the above subject will be borne in mind when the United Provinces Provincial Cotton Committee is reconstituted.

Copy of letter No. 5580, dated the 16th December 1932, from the Officiating Assistant Secretary to the Government of Bengal, to the Secretary, Indian Central Cotton Committee.

PROVINCIAL COTTON COMMITTEE—CO-OPERATION BETWEEN THE INDIAN CENTRAL COTTON COMMITTEE AND PROVINCIAL COTTON COMMITTEES.

I am directed to refer to Mr. Reddi's letter Cir. No. 351, dated the 20th September 1932, on the subject mentioned above, and to forward, for information, copy of Notification No. 5345-Agri., dated the 1st December 1932, regarding the appointment of Mr. Nalini Ranjan Sarkar, a member of the Indian Central Cotton Committee, as a member of the Cotton Sub-Committee of the Board of Agricultural Department, Bengal.

AGRICULTURE.

Notification.

Minister in charge—The Honourable Nawab K. G. M. Farequi, Khan Bahadur.

No. 5343-*Agri.*—1st December 1932—The Government of Bengal (Ministry of Agriculture) are pleased to appoint Mr. Nalini Ranjan Sarkar, a member of the Indian Central Cotton Committee, to be a member of the Cotton Sub-Committee of the Board of Agricultural Department, Bengal, constituted under notification No. 296 T. A. I., dated the 20th June 1932.

Copy of letter No. 36-D, dated the 6th January 1933, from the Deputy Secretary to Government, Punjab, Development Department, Lahore, to the Secretary, Indian Central Cotton Committee, Bombay.

SUBJECT.—*Provincial Cotton Committees—Co-operation between the Indian Central Cotton Committee and Provincial Cotton Committee.*

In reply to your Circular letter No. 351, dated the 20th September 1932, I am directed to intimate that the suggestion that members of the Indian Central Cotton Committee should also be members of the Provincial Cotton Committee in their respective provinces commends itself to the Punjab Government. It so happens that at the moment only one non-official member of the Provincial Cotton Committee is a member of the Indian Central Cotton Committee. The following particulars show the position :—

Un-official members of the Provincial Cotton Committee.	Period for which appointed.	Date of retirement.
1. W. Roberts, Esquire ..	.. 3 years ..	.. 1st April 1934.
2. R. B. Sewak Ram ..	.. ,, ..	.. ,,
3. S. S. Ujjal Singh ..	.. ,, ..	.. ,,
4. M. Ahmed Yar Khan Daultana	.. ,, ..	.. ,,
5. K. B. M. Fazal Ali ..	.. ,, ..	.. ,,

Un-official members of the Indian Central Cotton Committee.	Period for which appointed.	Date of retirement.
1. Major D. Vanrenen ..	.. 3 years ..	.. 31st March 1933.
2. Sardar Sampuran Singh ..	.. ,, ..	.. 31st March 1933.
3. K. B. Sardar Habibullah ..	.. ,, ..	.. 25th July 1935.
4. Mian Nurullah ..	.. ,, ..	.. 31st March 1935.
5. W. Roberts, Esq. ..	.. ,, ..	.. ?

2. It will be seen that all the non-official members of the Provincial Cotton Committee remain in office until 1st April 1934, so that if the number of non-official members remains 5 as at present, there will be no vacancy before April 1934, unless one of the existing members should happen to drop out meantime. Again, 2 of the present 5 non-official members of the Indian Central Cotton Committee retire at the end of March next and there is no certainty at present that they will be nominated for another term of three years. There would be little point, therefore, in considering appointing them to the Provincial Cotton Committee until and unless their term as members of the Indian Central Cotton Committee is extended. It may be difficult also always to arrange that all the non-official members of the Indian Central Cotton Committee are members of the Provincial Cotton Committee. The Punjab Government, therefore, considers that the case would be met sufficiently for the present if three gentlemen were non-official members of both the Committees.

3. I am accordingly to convey the sanction of the Punjab Government (Ministry of Agriculture) to the number of non-official members of the Provincial Cotton Committee being increased from 5 to 7 and to the nomination of Khan Bahadur Sardar Habibullah and Mian Nurullah as members of the Committee.

APPENDIX XIX.

SUBJECT 21.—*Invitation to members of the Indian Central Cotton Committee to visit Nanded Cotton Market.*

Secretary's Note.

The attached letter* from Mr. Collins, extending an invitation to the members of the Committee to pay a visit to the Nanded Cotton Market in order that they might gain personal knowledge of the effects of the measures introduced there, was placed before the Local Sub-Committee in October last. It was decided that the invitation should be brought to the notice of all members at this meeting of the full Committee so that any member wishing to gain first hand knowledge of the market may avail himself of the invitation.

APPENDIX XX.

SUBJECT 22.—*Present position of cultivators of long staple cotton.*

Secretary's Note.

At the invitation of the Indian Central Cotton Committee in May 1932, the Divisional Cotton Committee of Bombay, Southern Division, Dharwar, suggested the above subject for the consideration of the Indian Central Cotton Committee. A note on the subject was called for and it has now been submitted by Rao Bahadur C. S. Shirahatti (Enclosure 1). The views of Mr. Salimath, Deputy Director of Agriculture, S. D., and Dr. Burns on this note are given in their letters attached (Enclosures 2 and 3).

In this connection it may be recalled that in the latter half of 1930 the Indian Central Cotton Committee made very strenuous efforts to impress on the Government of India the necessity to afford some sort of relief to the Indian cotton cultivator from the hardships resulting from the then prevailing low level of prices, and that nothing more than a reduction in the margin of loans given by the Imperial Bank of India against cotton was then found possible. The Indian cotton cultivator is, in the matter of low prices to a large extent, at the mercy of world forces, and, as such, it can only be hoped that wages, rents and other fixed cultivation charges will soon adjust themselves to the prices of raw cotton making the growing of cotton as profitable as it was before the slump.

The specific remedial measures suggested by Rao Bahadur C. S. Shirahatti are for consideration.

(1) "*Stopping of importation by levying prohibitive duties*".—The Indian Central Cotton Committee has already represented to the Tariff Board that an import duty on cotton should afford protection to the grower of cotton of ⅞" to 1" staple. The report of the Tariff Board and the decision of the Government of India thereon may therefore be awaited.

* Not printed.

(2) " *Preventing malpractices* ".—Discussion on this subject may be raised on the report of the Local Sub-Committee, as it is referred to there.

(3) " *Affording hedging facilities in the Broach Hedge Contract* ".—As recommended by Dr. Burns this question may be taken up with the East India Cotton Association. The representatives of cotton growers on the Board of the East India Cotton Association may be asked to take it up with the Board.

(4) " *Standardization of Indian cottons, grading and issuing certificates by the East India Cotton Association* ".—The Local Sub-Committee may be asked to report, in consultation with the East India Cotton Association, on the feasibility of the proposals put forward in the note. The question of standardization of Kumpta and Upland cottons or rather the major question of common or universal standards for Indian cotton is a separate subject on the agenda of this meeting.

(5) " *Increase of yield per acre keeping the improvement in quality* ".—This subject is already before the Committee under " 5-Agronomy " in connection with the review of the Committee's work and research policy.

(6) " *The necessity of warehouses* ".—One of the recommendations of the Wiles Committee was the establishment of bonded warehouses by the East India Cotton Association a year after the introduction of the system of blind surveys. The East India Cotton Association may, if approved, be asked to implement this recommendation at an early date.

ENCLOSURE 1.

Note on the present position of the staple cotton growers of the Dharwar district by Rao Bahadur C. S. Shirahatti, Managing Director, Co-operative Cotton Sale Society, Ltd., Hubli.

INTRODUCTION.

The cotton was a money produce of the cultivator a decade back when every agricultural operations of cotton were met with minimum cost and the production fetched better prices; ultimately the cultivator was in a position to have a certain surplus after meeting his usual expenses such as Government assessment, family expenses etc., but unfortunately, now-a-days, the cotton cultivation has become a product of bringing equal return as that of other agricultural commodities. In this connection, the years 1930-31 and 1931-32 mark a page in the history of cotton of India as a whole and the district of Dharwar as particular, as has been easily glanced on the following grounds.

During the years 1930-31 and 1931-32, the area under cotton was 830,560 acres and 880,826 acres respectively, that is to say their area was equal. But during the year 1931-32, it was supposed that the area under cotton to be decreased on account of hopeless prices the cultivator realised during the previous season. As other produce was bringing the cultivator the equal disappointing prices, the cultivator had no other go than to fall upon cotton again. The average rates during the last two years may safely be taken as Rs. 127 and Rs. 110 per nag of *kapas* of 48 maunds respectively. Added to this hopeless price the crop of 1931-32, which had vigorous growth up to the end of November on account of favourable weather conditions and rains, was much damaged during the month of December by the heavy down-pour the result being the yield was poor. Low yield and poor prices have hit hard upon the cultivators on all the sides. There can be no economic recovery in our district or elsewhere in India until cotton and other basic commodities advance substantially from their existing ruining low-levels which are at present far below the actual cost of cultivation. From the attached Statement A, it can be seen that the cultivator loses about Rs. 9½ per acre he cultivates (*vide Statement B*). It is true that the yield of the Government Farm at Dharwar is 400 to 500 lbs. of seed cotton. Looking to the cost of production of the Farm and the return for their produce it also shows that Rs. 9 to Rs. 10 are lost per acre (*vide Statement C*). This loss automatically prevents the cultivator from manuring the soil for any crops which is an important factor in giving better crops.

Remedies.—The remedies for these odds are, the help from the Government, from the East India Cotton Association and from the Indian Central Cotton Committee.

Government's Help.—The Government is requested to stop the importation of foreign cottons by imposing heavy duties. India produces 50 to 60 lakhs of bales of which about 13 lakhs are stapled and can be used for spinning 20 to 30 counts of yarn. This prevention of importing naturally gives an impetus to our Kumpta and Upland cottons

and to all the stapled cottons of India. The Government also by legislation can stop the malpractices by the middlemen dealing in cotton. It has now become an open secret that the malpractices of mixing of inferior with superior cotton will heavily spoil the reputation of the stapled cottons of India such as Kumpta and Upland. Moreover, the premium of Rs. 50 to 60 '*on*' which is the beginning quotation of the season will be reduced to only 5 to 10 '*on*' when the arrivals would be free and the same tone of the market continues till the end of the season.

East India Cotton Association's Help.—That the Kumpta and the Upland cottons are not included into the Broach Hedge Contract in spite of the recommendations of the Wiles' Committee of 1930 with the full support of the trade, the Millowners of Bombay and Ahmedabad, the Exporters and the Indian Central Cotton Committee to include these growths into Broach Hedge Contract, is a great handicap as at the beginning of the season as has been said above. Kumpta and Upland cottons are sold Rs. 50 to 60 '*on*' Broach ; but the cultivators cannot be able to sell their produce at that time as major portion of their produce remains unpicked in the field. If, therefore, the hedging facilities are accorded, the premium of Kumpta and Upland over Broach will constantly be maintained or rather will not be so ruinously fluctuating either by the malpractices or by the continuous downs in the market as it does at present and the cultivators by making hedge sales through the Co-operative Cotton Sale Societies when the rates are favourable can protect themselves against subsequent fall in prices. This is an urgent necessity to which the Government, the East India Cotton Association and the Indian Central Cotton Committee should see that these cottons are included into the Broach Hedge Contract before the ensuing season as already recommended by the Wiles' Committee.

The improved cottons evolved by the Department of Agriculture grown on fairly extensive areas are in absolute need of being included into the Broach Hedge Contract. Without this protection, the cottons are in danger of being wiped out by short stapled growths now growing in the same tract. This will ultimately mean a huge waste of money and energy now being spent by the Co-operative and Agricultural Departments on the improvement of cottons.

Under the Cotton Transport Act, the Dharwar and Belgaum districts including the Native States are protected from the importation of inferior cotton from outside as this tract is famous for the cultivation of long stapled cottons from $\frac{7}{8}$" to 1" complete in length. This Legislation has no doubt done some good in preserving the stapled cottons pure but it has not stopped the malpractices such as mixing etc. It appears that other voluntary efforts on the part of the cultivators and the traders are quite essential to improve the situation. In this connection, I desire to suggest that a Local Sub-Committee for this tract with its centre at Hubli consisting of the representatives of millowners and exporters, traders and the growers is necessary to make average types of genuine cotton and submit them to the East India Cotton Association to bring to the notice of the millowners and exporters the pure types of stapled cottons available from this tract. This Local Sub-Committee should be formed of the following interests :—

Two members one from each of the Hubli and Gadag Co-operative Cotton Sale Societies representing the cotton growers.

One member representing the exporting firms.

One member representing the agents of the millowners.

One member representing the traders.

Total five members.

By these arrangements the Local Sub-Committee consisting of expert men having long standing experience of cotton trade will pool all their resources and experiences to fix standard of cotton produced in this tract for marketing of pure and long stapled cotton in Bombay on efficient and improved method stopping malpractices. I think, this will lead and help to the standardization of Indian cottons on scientific basis with the help of the East India Cotton Association, the Indian Central Cotton Committee and the Government on wider scale in future. By this procedure the East India Cotton Association will be able to allow to sell all the cottons arriving in Bombay after being graded by their certified and paid grader, who should after grading issue a certificate as to the merit of the cotton on the strength of the standardized sample sent by the aforesaid Committee and preserved by themselves. Such Local Sub-Committees are most desirable in all cotton growing parts of India to achieve the intended object of the standardization of Indian cottons under the control and direction of the East India Cotton Association. By these means, I am confident, that the long stapled growers of India will be in a better position to get more adequate prices than at present for the cotton

reaching Bombay in pure condition. Royal Commission on Agriculture in India is in favour of the above principles but says that there are some administrative difficulties. I hope that Government will see that these difficulties are removed and render all help in this urgent and important matter in the interest of the cotton grower and the trade just as in America (*vide* pages 401 to 403 of the Report of the Royal Commission).

Under the existing unsatisfactory condition of handling and marketing of Indian cottons and owing to various malpractices, the Indian cotton has acquired a bad reputation in the foreign markets. If the above measures especially the standardization of Indian cottons are materialised in the immediate future, the standardized Indian cottons like the Americans will benefit the cotton grower by creating more demand at home and abroad markets than at present.

Help from the Indian mills.—Now the duty of the Indian mills is to consume all Indian cottons and make it a point not to think of importing the foreign cottons as our staple cottons can easily be a better substitute. No doubt, the mills do require some kind of protection against the foreign competition. But nevertheless, if they make it combined effort to consume Indian cottons only they can to a considerable extent help the cultivators. They should discourage the malpractices of middlemen and should not be misled by the competitive firms offering Rs. 10 to Rs. 15 cheaper than their own agents for the same stuff. Low quotations are themselves sufficient indications of malpractices. By purchasing through their agents they will get the pure stuff only.

Warehouses.—For want of proper financial accommodation, during the process of marketing, the cotton growers and the dealers are very much handicapped in the up-country and Bombay markets because they are obliged to sell the cotton at very low prices during the periods of glut. This state of things, I am sure, can be improved by the establishment of the warehouses certified by the East India Cotton Association in Bombay and up-country. The Banks will advance money to the cultivators to the full extent for the certified cotton stored in the warehouses. And also there are other advantages inasmuch as this will minimise the dumping of cotton in Bombay and up-country markets, decrease handling charges and will widen the market by helping the cultivators and the dealers to sell the cotton at better prices under favourable conditions (*vide* Report of the Royal Commission—page 395).

Conclusion.—In the United States of America the cultivator can get an average of 150 lbs. of lint per acre he cultivates, i.e., 2·7 acres will have to be required to press an Indian bale of 400 lbs. lint whereas in this district 50 lbs. of lint is produced on one acre, that is to say, that 7 to 8 acres are required to have a bale of the type. If we take into consideration the whole Indian cotton crop, the average yield per acre will come to about 80 lbs. lint, i.e., five acres are required to be under cotton to have a bale of 400 lbs. of lint. Hence I suggest that the Department of Agriculture of our district should carry on vigorous research in this direction to find out some varieties of cotton suitable to our tract which will give more yield, more ginning percentage preserving at the same time the high quality of staple since the majority of the cotton growers are not in favour of growing the Jayawant and Upland cottons on account of the low yield as compared with the local ordinary cottons.

These are some of the needs of the staple cotton cultivator of our district. The staple cotton cultivators in other parts of India are more or less in the same worse condition. To sum up, I repeat, the cotton cultivation has now-a-days become a losing concern and the cultivator stands on the verge of complete ruin. The effective remedy as mentioned above would be :—

(1) Stopping of importation by levying prohibitive duties.

(2) Preventing malpractices.

(3) Affording hedging facilities in the Broach Hedge Contract.

(4) Standardization of Indian cottons, grading and issuing certificates by the East India Cotton Association.

(5) Increase of yield per acre keeping the improvement in quality.

(6) The necessity of warehouses.

Help from the Indian Central Cotton Committee.—The Central Cotton Committee is earnestly requested to bring all the abovementioned vital needs of the cultivator into operation in the near future, i.e., before the commencement of trading in new year's crop by requesting the Government and pressing the East India Cotton Association to do the needful in the matter.

STATEMENT A.

Statement showing the net loss per acre under cotton cultivation.

Item.	1930–31.		1931–32.	
1. Area under cotton ..	830,560		880,826	
2. Number of pressed bales.	100,380		106,958	
3. Number of acres required to produce a bale of 400 lbs. lint ..	7 to 8 acres.		7 to 8 acres.	
4. Average yield per acre ..	175 lbs. seed cotton.		198 lbs. seed cotton.	
5. Average price realised at the Cooperative Cotton Sale Society, Hubli, per nag of *kapas* of 48 maunds ..	Rs. 127-0-0		Rs. 110-0-0	
6. Value realised by the cultivator per acre on 175 and 198 lbs. of seed cotton respectively ..	Rs. 16-8-6		Rs. 16-3-3	
7. Cost of cultivation per acre	Rs. 25-9-0		Rs. 25-9-0	
8. Net loss per acre ..	Rs. 9-0-6		Rs. 9-5-9	
	Acres.	Amount of loss.	Acres.	Amount of loss.
9. Total loss as detailed below :—		Rs.		Rs. a. p.
Dharwar District British Area	630,560	56,94,745	680,826	63,72,105 13 6
Dharwar District State Area	100,000	9,03,125	100,000	9,35,937 8 0
Area of Moglai and Bellary District ..	100,000	9,03,125	100,000	9,35,937 8 0
Total ..	830,560	75,00,995	880,826	82,43,980 13 6

N.B.—The whole area under item No. 1 includes the areas belonging to the Native States, *viz.*, Kundgol, Gudgeri, Laxmeswar, Shirahatti, Savanur, etc., that are lying in the heart of the district. This area of these States will come to 1 lakh of acres; and again this area includes a lakh of acres more that lie in Moglai territory and Bellary District the cotton production of which is marketed in the Gadag market under license. Thus these two lakhs are included in the area of the Dharwar District and the total number of bales pressed therein.

STATEMENT B.

Statement showing cost of cultivation of cotton per acre by the cultivators.

	Rs.	a.	p.
Cost of collecting stubbles per acre (5 women at as. 3)	0	15	0
Cost of ploughing per acre (2 men 4 bullocks at 1-4 for 1 man and 2 bullocks)	2	8	0
Cost of harrowing per acre (3 harrowings)	0	12	0
Cost of sowing per acre	2	8	0
Cost of seed per acre (9 lbs.)	0	4	0
Cost of interculturing per acre (3 intercultures)	1	2	0
Cost of weeding per acre (11 women)	2	0	0
Cost of picking per acre (As. 4 per maund)	2	0	0
Cost of marketing per acre	1	8	0
Land rent per acre including Government assessment	12	0	0
Total ..	25	9	0

200 lbs. of seed cotton per acre.

STATEMENT C (1).

Statement showing the cost of cultivation per acre at Government Farm, Dharwar.

	Rs.	a.	p.
Cost of collection stubbles per acre (5 women at as. 3 per woman) ..	0	15	0
Cost of ploughing per acre	4	10	8
Cost of harrowing per acre (3 harrowings)	1	0	0
Cost of sowing, dibbling	2	15	0
Cost of seed per acre (4 lbs. per acre)	0	1	9
Cost of interculturing (6 intercultures)	2	12	4
Cost of weeding per acre (3 women)	0	9	0
Cost of picking per acre at as. 6 per maund	4	8	0
Cost of marketing per acre	3	0	0
Land rent per acre	30	0	0
Cost of supervision per acre	3	0	0
Value of residual effect (manure)	2	8	0
Total ..	55	15	9

Yield 500 lbs. seed cotton.

STATEMENT C (2).

Statement showing the cost of cultivation on Surat Farm per acre.

Items.	Men.	Women.	Bullocks.
Preparatory tillage	$\frac{3}{5}$	..	1
Collecting stubbles	..	$4\frac{1}{2}$	..
Dibbling	..	4	..
Gap filling	..	4	..
Thinning	..	2	..
Interculturing	$2\frac{3}{4}$	..	$5\frac{1}{2}$
Weeding	..	10	..
Picking by contract	..	$5\frac{1}{2}$	..
Digging cotton stacks	2	..	..
Collecting and carting cotton stubbles	$\frac{1}{4}$	..	$\frac{1}{2}$
	$5\frac{1}{2}$	30	7

Labour wages.	Man (as. 8).	Woman (as. 6).	Bullock (Re. 1).	Boy (as. 4).
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
$5\frac{1}{2} \times 1\frac{1}{2}$ ..	2 12 0	....	....	....
30 × 6/16 ..	....	11 4 0	....	....
7 × 1 ..	....	....	7 0 0	....
	Total cost of labour Rs. 21 per acre.			

	Rs. a. p.
Cost of labour	21 0 0
Farm manure (5 cartloads at Rs. 1-8-0)	7 8 0
Marketing charges	2 0 0
Supervision charges	8 0 0
Interest on outlay on Rs. 21 at 9 per cent. for 6 months	0 14 0
Rent per acre	20 0 0
Hire appliance	1 4 0
Total cost per acre ..	60 10 0

Yield per acre 500 lbs. of seed cotton.

The statement showing the cost of cultivation, yield and value realised per acre through the Co-operative Cotton Sale Society, Hubli, on the cultivators' farm at Sherewad in Hubli Taluka where Jayawant pedigree seed of III Generation is grown every year for further multiplication of seed under the supervision of the District Cotton Overseer, Hubli, and the Co-operative Cotton Sale Society, Ltd., Hubli, during the years 1930–31 and 1931–32.

Particulars.	1930–31.	1931–32.
1. Cost of cultivation per acre as detailed below :—		
	Rs. a. p.	Rs. a. p.	Rs. a. p.
1. Cost of collecting stubbles—5 women at as. 3.	0 15 0		
2. Cost of ploughing—2 men and 4 bullocks at Rs. 1-4 for 1 man and 2 bullocks	2 8 0		
3. Cost of harrowing (3) ..	0 12 0		
4. Cost of sowing ..	2 8 0		
5. Cost of seed (10 lbs.) ..	0 8 0		
6. Cost of 6 intercultures ..	2 4 0		
7. Cost of weeding (11 women) ..	2 0 0		
8. Cost of picking at as. 5 per maund ..	2 8 0		
9. Cost of marketing ..	1 8 0		
10. Land rent including Government assessment	15 0 0		
11. Value of residual effect (manure)	2 8 0		
Total ..	32 15 0	32 15 0	32 15 0
2. Yield per acre		181 lbs. seed kapas.	220 lbs. seed cotton.
3. Value realised on 181 lbs. and 220 lbs. of seed cotton respectively		19 2 0	18 14 0
4. Net loss per acre ..		13 13 0	14 1 0

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ENCLOSURE 2.

Copy of letter No. 151, dated the 12th January 1933, from the Deputy Director of Agriculture, Southern Division, Dharwar, to the Director of Agriculture, Bombay Presidency, Poona.

Present position of the stapled cotton growers of the Dharwar District.

With reference to your endorsement, No. 804/15540, dated 18th November 1932, I have the honour to submit my remarks as under :—

I agree with Rao Bahadur Shirahatti that it has been very difficult for the tenant-farmer to get his living by farming during the last two years, owing to low yields and fall in prices. It is the rent of the land which is the main cause of the trouble. It is not at all proportionate to the income. Rs. 12 per acre for a land producing only 200 lbs. cotton is too much, even to think of. I do not know whether it is the rent current or contracted in the past. Rs. 30 per acre for some exceedingly good area in the farm is the rent contracted in the past, when the prices of cotton and other farm-produce were very high. If we remove the rent of the land from the two statements given by Rao Bahadur Shirahatti, the cost of cultivation is at once reduced to half. The costs of some of the remaining items shown in the statement seem to be rather high ; for instance Rs. 2-8-0 per acre for sowing is too much in the cultivators' fields. The cost of all items except land-rent taken together, however, which comes to Rs. 13 per acre, is not far from correct. I must point out here that this contains mostly the cost of personal labour of the cultivator, his family and his bullocks. An income of Rs. 16 which is the value of 200 lbs. cotton per acre just covers the cost of cultivation and land assessment which may be about Rs. 2 per acre. With the low yield of 200 lbs. cotton per acre and with the existing low prices for it, the tenant is not in a position to pay high land rent.

The remedy chiefly consists in adjusting the rent of the land either by a Tenancy Act or by co-operative efforts. As a matter of fact, the rents are now going down. The remedies suggested by Rao Bahadur Shirahatti, viz., imposing heavy duty on the importation of foreign cotton, inclusion of Kumpta and Upland cottons in Broach Hedge Contract, preventing malpractices of mixing and watering and the organisation of licensed warehouses, certainly go a long way to increase the value of these two cottons grown in Karnatak and I strongly recommend them for favourable consideration.

As regards the formation of Local Sub-Committees for standardisation of Indian cottons, I may point out that this subject was thoroughly discussed in our Divisional Board Meeting held on 19th October 1932 and the resolution passed there runs as under :—

"VII. The Board approves of the idea of fixing universal standards for Indian cottons and suggests that Government should, in the interests of cotton-growers, first investigate through its Agricultural Departments the desirable standards before any further move is made in the matter and that it should not leave the matter entirely into the hands of trade."

It seems necessary that Government through its Agricultural Department should make a comparative study of all the cotton-growths in India and then try to fix the necessary standards in consultation with the trade.

As regards Jayawant and Upland cottons, I beg to state that they are better in ginning percentage and staple than local Kumpta and Dharwar-American cotton respectively. The yields in good lands are also as good or slightly better than the local ones. Attempts are in progress on Dharwar and Gadag Farms to achieve still better results.

Rao Bahadur Shirahatti's note is herewith returned.

ENCLOSURE 3.

Copy of letter No. 804, dated the 16th January 1933, from the Director of Agriculture, Bombay Presidency, Poona, to the Secretary, Indian Central Cotton Committee.

Present position of the staple cotton growers of the Dharwar District.

With reference to your letter 1479, dated November 15, 1932, and subsequent reminders, I have the honour to state that I had referred the matter to the Deputy Director of Agriculture, Southern Division, Dharwar, and I enclose a copy of his letter 151, of January 12, 1933. I am in general agreement with his remarks.

I trust that the investigation of the cost of production of cotton and sugarcane will throw further light on this vexed question of the profitableness or otherwise of cotton growing in the Southern Division. I trust also that the Indian Central Cotton Committee will take a step forward towards fixing universal standards for Indian cottons, and I earnestly bring forward once more the desirability of reconsidering the inclusion of Kumpta and Upland cottons in the Broach Hedge Contract.

APPENDIX XXI.

SUBJECT 23.—*Note on 27 W. N. Sind Deshi cotton by Mr. G. B. Kotak.*

Secretary's Note.

The attached note on 27 W. N. Sind Deshi cotton received from Mr. G. B. Kotak of Karachi is for consideration.

The note on short stapled cotton referred to therein has been forwarded to the Chief Agricultural Officer in Sind, Karachi, for consideration by the Sind Cotton Committee, whose proceedings* are awaited. A copy of this note is also attached.

Copy of note forwarded by Mr. G. B. Kotak with his letter dated the 16th December 1932.

27 W. N. Sind Deshi Cotton.

I sent you some observations about "Short Stapled Cotton" before the Summer Sessions on 14th July 1932. You said it was too late for the agenda for that meeting and that you would put it before the Winter Sessions.

In that letter I referred to 27 W. N. (Sind *Deshi* Cotton). This is an early maturing, high yielding cotton with higher ginning percentage than the stapled varieties on this side. Sind Agricultural Department in its report says :—

"27 W. N. has again proved, in replicated tests, that it is a higher yielder than any other variety under trial. It gives an early and abundant crop (about 16-20 per cent. higher outturn than ordinary Deshi) and has 4.5 per cent. higher ginning percentage."

..... "Other selected strains of Punjab-American varieties 4F (etc.)..... do not

*Since received (*vide* page 174).

appear to be so suitable for extension in Sind "....." "It must, however, be noted that these superior quality cottons, when grown under Sind conditions, are much more susceptible to seasonal fluctuations and soil variations than the hardier but inferior types" ..... "27 W. N. is hardy, high yielding and has a higher ginning percentage. The cultivation of this improved strain has extended widely and is popular both with the growers and the trade."

I have tried to give the trade's point of view in my letter above referred to. There is a "Sind" forward contract in the Karachi market. This is a major contract just as Broach contract in Bombay, and can absorb much larger quantity than at present. In fact the contract *is* narrow because there is not enough cotton. As the season advances there is always scarcity of cotton and that makes the contract narrow still.

As will be seen, this cotton is good from the agriculturist's as well as the trader's point of view. I would, therefore recommend the Committee to encourage the expansion of this variety particularly in the new land recovered by the Sukkur Barrage.

Note by Mr. G. B. Kotak on Short Stapled Cotton.

(Particularly Deshi cotton of Sind, Punjab and United Provinces.)

I have felt all along that much of our attention has been given to the growth of long stapled varieties of cotton than the short stapled *Deshi* varieties. There is room for both in the manufacturing world and each has its distinct place there. India consumes more cotton which spins 20^s and below than cotton which spins higher. Also foreign countries are using increasingly Indian short stapled cotton. Particularly Japan has taken increasingly to short stapled varieties of Bengals and Sind *Deshi*. They are replacing Comra by Bengal in their mixtures for counts below 20^s. Even Lancashire has started taking interest in these qualities probably to compete with Japanese manufacture. This is one great reason why merchants prefer stocking short stapled to long stapled cottons because there is a quicker offtake in the one than the other. There is a ready market for short stapled qualities.

It is quite natural that one looks to cheaper qualities which might work as a substitute for the slightly better one. In that process Sind and Bengals come last and cannot be replaced by a cheaper variety. There is no cheaper or allied quality. In this lies its strength.

This season, which is practically over, has provided a very glaring instance of what I say. *Deshi* Sind cottons have been sold at same rate as Broach and Punjab *Deshi* about Rs. 10 off Broach. The reason might be given that there was a short crop in these qualities this season; but it was same with the stapled qualities also. Fact is this that stapled cotton has to meet a world competition. Wherever in the world cotton grows, it is mostly long stapled cotton except in parts of China. Efforts are made all over the world to find fresh fields for stapled cotton. Even China is trying to replace the short by the long staple. India has practically the monopoly of the supply of short stapled cottons.

If the short stapled cotton fetches lower prices than the long stapled one, it has other advantages which should amply compensate. The short stapled cotton plants give more yield per acre, has more ginning percentage and still more important it is a very hardy plant. It resists the rigours of climate and diseases much better than stapled varieties. This is particularly in reference to 27 W. N. which is grown in Sind. I am told by the Sind Agricultural Experts that the cotton plant loses its resistance in proportion to its staple producing capacity. Longer the staple less the hardiness of the plant. Our cultivator, less advanced as he is, is not quite capable of taking care of a variety which is very sensitive to rigours of weather and which requires very careful handling.

There is one more compensating feature for the short stapled cotton. The seed of *Deshi* variety sells at a premium over the American seed as the former is considered superior fodder to the latter.

It is a fact that India imports stapled cotton from foreign countries; and it should be our natural desire to replace these by stapled indigenous growths. But the advanced agricultural system in those countries, the credit system there and the world competition in stapled cottons continue to keep attractive prices for Indian consumers of stapled cotton. For years to come, American cotton is bound to offer cheaper than Indian; we can well see it today when in spite of duty of Rs. 25 per candy, American cotton has continued to come to India. I do not mean that, because of certain inevitabilities, we should reduce our efforts in the direction of producing stapled growths. I only urge that short stapled cotton deserves as much attention or more being in specially advantageous position. I would, therefore, suggest the following resolution for the forthcoming meeting:—

"That the present tracts of land which grow short stapled varieties in Sind, Punjab and United Provinces be kept intact and more efforts be made to improve the quality and yield of short stapled varieties."

APPENDIX XXII.

SUBJECT 42.—*Review of the Committee's work and Research Policy.*

Secretary's Note.

At its 24th meeting held in December 1931, the Indian Central Cotton Committee had a full discussion on the subject of "Past work and future policy" of the Committee. No formal resolution was passed, but it was, however, agreed that the points of general agreement should be brought before the Committee at its next meeting and they are formulated below for further examination and final decision.

(1) *Research.*—The present policy of avoiding any piece of research, which would prove of academic interest only, should be adhered to. All research work should have the economic end clearly in view, and whether the problem for solution is a fundamental one or not, or the investigation itself is going to be a "long-term" or a "short-term" one, it should be undertaken so long as it gave the best promise of yielding practical results.

(2) *Staple nomenclature.*—Staple below $\frac{7}{8}$" should be called "short", between $\frac{7}{8}$" and 1" should be called "medium" and above 1" "long".

(3) *Short staple* versus *medium and long staples.*—India cannot afford to lose her monopoly in short staple cotton. At the same time every effort should be made to make India self-sufficient in the matter of her mill requirements of medium and long staple cottons, though any exportable surplus of the latter group is not desirable. For this purpose, the Committee should keep itself posted up-to-date as to the nature of the export and Indian mill demands for the various types of Indian cotton, and of the variations, if any, in them from time to time. (*Vide Enclosure* 1 which gives an idea of the exportable surplus in each variety. *Enclosure* 2 gives the exports during the last four seasons classified by varieties.)

(4) *Demarcation of tracts for different staples.*—This should be done with reference to the trend in the development of the Indian cotton spinning industry in the different parts of the country, and more particularly with reference to the natural advantages of each tract, the judicious exploitation of which alone would ensure the maximum return to the grower without exposing him to risks arising out of his failure to maintain artificial conditions.

Slight improvements in the staple of short staple varieties at the expense of yield and ginning percentage under ordinary cultural processes should be discouraged. Indiscriminate introduction of medium or long staple cotton in short-staple areas should be stoutly opposed until long experience had definitely proved that the new type was suitable in every respect for the tract, and more paying to the grower.

Every improvement, however so little, in the staple of the existing medium staple varieties such as "Kumptas", "Gaorani", "Cambodias", "Tinnevellies", "Punjab-Americans", "Broach" etc. should be welcomed.

(5) *Agronomy.*—Greater attention should be directed towards the improvement of the yield of Indian cotton by improved cultural methods and to bring to the help of the growers ways and means to combat the vagaries of the season.

(6) *Marketing.*—The Committee should pay more attention to the improvement of marketing. Steps should be taken to introduce legislation on the lines of the Bombay Cotton Markets Act all through India.

(7) *Picking.*—The Committee should impress on the growers that clean picked cotton means more money to them, and advise them as to the best methods of picking their cotton clean. Prizes should be offered, if necessary. The Committee should also investigate the possibility of eliminating by plant breeding methods those bad traits in the bolls of "Bani" and other cottons which make clean picking almost impossible even with great care.

(Prize schemes for clean picking and improved varieties of cotton were considered and rejected at the last meeting of the Committee.)

(8) *Storing.*—The Committee should educate the growers on the best methods of storing *kapas.*

(9) *Clean ginning.*—The Committee should encourage the installation of openers in ginneries.

(10) *Malpractices.*—One of the main planks in the Committee's future policy should be the licensing of gins and presses with a view to put a stop to the three great defects of Indian cotton, *viz.*, mixing, watering and foreign matter. A simple bill which would not necessitate the employment of a large corps of low paid inspectors should be drawn up.

(This subject was considered by the Local Sub-Committee at its meeting held on the 14th October 1932 when it was decided that further consideration of the subject should

be postponed to the next monsoon meeting. Discussion on this subject can be raised when considering the report of the Local Sub-Committee.)

(11) *The Cotton Ginning and Pressing Factories Act.*—The administration of this Act should be tightened up at the source, preferably by the licensing of pressing factories referred to previously. In any case, it is too much to expect the trade to report all cases of faulty marking.

ENCLOSURE 1.

Indian cotton crop classified by staple lengths and estimated requirements of mills in India of each variety.

(In thousands of bales of 400 lbs. each.)

Trade descriptions.	Production according to forecasts during the ten seasons 1922–23 to 1931–32.		Production according to trade estimates—normal season.	Approximate requirements of mills in India.	Remarks.
	Highest.	Lowest.	(*b*)	(*c*)	
Short Staple—Below $\frac{7}{8}$".					
Oomras—Khandesh ..	338	165	2,300	45	
Central India ..	404	204		260	
Barsi and Nagar ..	488	341		35	
Berar	784	346		75	
Central Provinces ..	550	138		140	
Broach (part)	126	57	*	*	*Included in medium staple Broach.
Dholleras	858	311	400	205	
Bengals—United Provinces ..	322	180	1,300	155	
Rajputana ..	144	72		40	
Sind-Punjab ..	676	395		63	
Others ..	17	15		..	
Comillas, Burmahs etc. ..	124	67	200	10	
Cocanadas	57	30		10	
Salems	42	23		24	
Total—Short Staple ..	4,930	2,344	4,200	1,062	
Medium Staple—$\frac{7}{8}$" to 1".					
Oomras—Hyderabad Gaorani (*a*) ..	126	115	250	140	
Verum 262 ..	20	7	200†	20	†Too high.
Broach (part)	223	140	350	265	
Kumpta-Dharwar ..	333	178	200	170	
Westerns and Northerns ..	385	167	250	180	
Tinnevellies	180	129	180	110	
Cambodias	183	90	180	135	
Americans (Punjab and Sind) 4F (*a*)	367	121	450	140	
Total—Medium Staple ..	1,817	947	2,060	1,160	
Long Staple—Over 1".					
Punjab-American, 289F ..	12	2	..	12	
Total—Long Staple ..	12	2	..	12	
Grand Total ..	6,759	3,293	6,260	2,234	

(*a*) If marketed pure.

(*b*) Taken from page 14 of "Cotton Improvement in India."

(*c*) Estimated from voluntary returns showing varietal details of cotton received at mills during the seasons 1928–29 and 1931–32 furnished by mills.

ENCLOSURE 2.

Exports of Indian cotton classified by varieties (compiled from returns furnished by exporters).

(In thousands of bales of 400 lbs. each.)

Description of Cotton.	Season 1928–29. Exports.				Season 1929–30. Exports.			
	Japan and the East.	Europe and the West.	United Kingdom.	Total.	Japan and the East.	Europe and the West.	United Kingdom.	Total.
Khandesh	143	127	1	271	135	105	1	241
Central India ..	134	26	1	161	139	40	..	179
Barsi and Nagar ..	52	10	..	62	62	14	..	76
Hyderabad Gaorani ..	34	10	..	44	47	7	..	54
Berar	217	108	9	334	201	114	11	326
Central Provinces ..	135	38	11	184	100	54	21	175
Unclassified	155	252	14	421	199	202	22	423
Oomras—Total ..	870	571	36	1,477	883	536	55	1,474
United Provinces ..	31	37	2	70	26	53	5	84
Rajputana	1	3	..	4	3	6	..	9
Sind-Punjab	114	115	10	239	185	125	9	319
Others	..	..	..	..	..	..	..	..
Unclassified	54	198	10	257	81	278	10	369
Bengal-Sind—Total ..	200	348	22	570	295	462	24	781
Punjab-American ..	154	95	79	328	209	105	105	419
Sind-American ..	2	6	2	10	..	8	9	17
Americans—Total ..	156	101	81	338	209	113	114	436
Dholleras	73	2	..	75	45	12	3	60
Broach and Surat-Navsari.	44	8	7	59	69	13	6	88
Kumpta-Dharwar and Dharwar-American ..	21	2	..	23	7	2	..	9
Westerns and Northerns ..	15	51	4	70	18	50	7	75
Cocanadas	29	26	7	62	14	37	9	60
Tinnevellies and Karungannies	55	12	9	76	45	18	7	70
Salems	..	1	3	4	3	1	1	5
Cambodias	5	5	7	17	51	8	6	65
Comillas, Burmas etc. ..	..	13	4	17	23	15	2	40
Unclassified	2	6	..	8	..	..	..	..
Grand Total ..	1,470	1,146	180	2,796	1,662	1,267	234	3,163
Exports as per Director-General of Commercial Intelligence and Statistics' statistics.	2,178 Japan and China.	1,429 Continent.	233 United Kingdom.	3,933 Total including "other countries 93".	1,964 Japan and China.	1,515 Continent.	286 United Kingdom.	3,868 Total including "other countries 103".

ENCLOSURE 2—*contd.*

Description of Cotton.	Season 1930-31. Exports.				Season 1931-32. Exports.			
	Japan and the East.	Europe and the West.	United Kingdom.	Total.	Japan and the East.	Europe and the West.	United Kingdom.	Total.
Khandesh	142	56	1	199	109	16	..	125
Central India ..	146	12	2	160	60	4	..	64
Barsi and Nagar ..	34	6	1	41	42	2	1	45
Hyderabad Gaorani ..	20	4	..	24	6	1	..	7
Berar	233	66	7	306	202	21	1	224
Central Provinces ..	127	50	26	203	68	13	13	94
Unclassified	245	131	13	389	12	7	..	19
Oomras—Total ..	947	325	50	1,322	499	64	15	578
United Provinces ..	17	36	15	68	9	23	21	53
Rajputana	2	..	..	2	..	2	..	2
Sind-Punjab	160	118	20	298	171	132	26	329
Others	..	..	..	..	..	..	..	..
Unclassified	65	159	45	269	40	49	3	92
Bengal-Sind—Total ..	244	313	80	637	220	206	50	476
Punjab-American ..	255	77	86	418	43	19	31	93
Sind-American ..	5	10	19	34	3	2	4	9
Americans—Total ..	260	87	105	452	46	21	35	102
Dholleras	117	9	..	126	30	13	..	43
Broach and Surat-Navsari	66	12	3	81	35	5	1	41
Kumpta-Dharwar and Dharwar-American ..	1	1	..	2	..	..	..	..
Westerns and Northerns ..	13	30	1	44	13	10	..	23
Cocanadas	15	28	5	48	6	6	7	19
Tinnevellies and Karungannies	38	3	1	42	21	..	1	22
Salems	5	..	..	5	3	..	..	3
Cambodias	43	2	..	45	16	..	..	16
Comillas, Burmas etc. ..	24	15	2	41	7	18	2	27
Unclassified	..	..	..	..	3	6	..	9
Grand Total ..	1,773	825	247	2,845	899	349	111	1,359
Exports as per Director-General of Commercial Intelligence and Statistics' statistics.	2,379 Japan and China.	1,003 Continent.	274 United Kingdom.	3,729 Total including "other countries 73".	1,000 Japan and China.	444 Continent.	125 United Kingdom.	1,582 Total including "other countries 13".

APPENDIX XXIII.

SUBJECT 35.—*Agricultural Research—Report of the Agricultural Research Sub-Committee.*

As decided by the Indian Central Cotton Committee at its meeting held in August 1932, the Agricultural Research Sub-Committee on meeting at 10-30 a.m. on Monday, the 30th January 1933, divided itself into the following three Sectional Sub-Committees for detailed examination and report on the subjects noted against each :—

Sectional Sub-Committee No. I.

Members.—Dewan Bahadur Sir T. Vijayaraghavacharya, K.B.E. (Chairman),

Mr. S. V. Ramamurty,

Rai Saheb Th. Ram Prasad Singh, and

Mr. F. K. Jackson.

Subjects.—Dharwar Cotton Wilt Research Scheme—Proposed extension of Writing-up Scheme.

Broach and Jalgaon Cotton Breeding Schemes—Additional grants for apparatus.

Proposal to undertake fundamental research on cotton wilt (*Fusarium*) at the Institute of Plant Industry, Indore.

Scheme for the improvement of Comilla cotton in Bengal.

Scheme for the breeding of annual varieties of Nadam cotton grown in Salem and Coimbatore districts of the Madras Presidency.

Scheme for an exhaustive survey of cottons in Rohilkhand and Bundelkhand, United Provinces.

Sectional Sub-Committee No. II.

Members.—Sir Joseph A. Kay, Kt. (Chairman),

Mr. H. R. Stewart,

Mr. P. B. Richards,

Dr. W. Burns, and

Rai Saheb Kalidas Sawhney.

Subjects.—Final Report on Gujerat Boll-worm Research Scheme.

Gujerat Boll-worm Clean-up Scheme—

(*a*) Progress Report,

(*b*) Proposed extension of.

Punjab Entomological Research Scheme—Proposed extension of—

Scheme for the investigation of Pink and Spotted Boll-worm pests in Hyderabad State.

Scheme for the investigation of Spotted Boll-worm in the Punjab.

Purchase of a Balls Sorter with Torsion Micro Balance for the use of the Technological Assistant, Gujerat, Surat.

Sectional Sub-Committee No. III.

Members.—Mr. B. C. Burt, C.I.E., M.B.E. (Chairman),

Mr. W. J. Jenkins, and

Mr. C. V. Sane.

Subjects.—Madras Fodder Cholam Scheme—Revised Budget Provision for 1933-34.

Proposed extension of the Hyderabad Seed Distribution Scheme.

Scheme for a grant for the formation of Zemindara Co-operative Sale Societies for the sale of all farm crop produce, including Punjab-American cotton on the lines of the Okara Zemindara Association.

Scheme for the grant of Rs. 25,000 for two years to enable the Punjab Agricultural Department to sell its pure seed at rates more nearly to *bazaar* rates for ordinary seed.

Application for a seed storage scheme in the Navsari District of Baroda State.

Scheme for Comparative Tests between 1027 A.L.F. and 1-A cottons in Navsari District, Baroda State—Proposed extension of—

The reports submitted by the Sectional Sub-Committees were considered by the main Sub-Committee on the 31st January 1933.

A. REPORT OF THE AGRICULTURAL RESEARCH SUB-COMMITTEE ON PROGRESS REPORTS AND PROGRAMMES OF WORK.

Gujerat Boll-worm Research Scheme—Final Report.—The Final Report on this scheme embodying the work done and the results achieved during the eight years of its life from 1923 was considered by the Sub-Committee. The Sub-Committee recommends that the report be sent to the Imperial Council of Agricultural Research to be published as a scientific monograph.

Ginnery at Lyallpur.—The programme of work for the ensuing season submitted by the Director of Agriculture, Punjab, was considered and approved.

B. REPORT OF THE AGRICULTURAL RESEARCH SUB-COMMITTEE ON NEW SCHEMES AND EXTENSIONS OF OLD SCHEMES.

(1) New Schemes.

Hyderabad Entomological (Pink and Spotted Boll-worms) Scheme.

The Sub-Committee considered a scheme for the investigation of the Pink and Spotted Boll-worms in the Hyderabad State and recommends that it might be sanctioned. Preliminary investigations carried out by the Hyderabad Agricultural Department since 1930 have showed that the damage done by these pests to the cotton crop of the Godavery valley in the State was considerable, and that with another year's study of the incidence of the pests and their mode of carrying over from season to season, the Department would be in a position to concentrate attention on control measures during the next two years. The total estimated cost for three years from June 1933 is Rs. 21,548. The State has promised to provide working accommodation for the staff, and land for experimental crops. The State has also waived leave and pension contributions for the staff. The Sub-Committee considered it desirable to add the provision of Rs. 686 for cages to the provision for labour for sieving soil as the Cawnpore cages can be transferred for this work. Supplementary grant for transport, re-conditioning and the erecting of these cages should be applied for at the next meeting.

Punjab Spotted Boll-worm Scheme.

The Sub-Committee considered the scheme and decided that it might be referred back to the Director of Agriculture, Punjab, for formulating a scheme for investigating control measures under the Punjab conditions after a further study of all the work so far done on this pest elsewhere and the results obtained.

Punjab Seed Distribution and Extension Schemes.

(*a*) *Sale of pure seed at bazaar rates for ordinary seed.*

A subsidy of Rs. 25,000 per annum for two years to enable the Agricultural Department to sell pure cotton seed at the *bazaar* rate for ordinary seed, asked for by the Director of Agriculture, Punjab, was rejected.

(*b*) *Organisation of Zemindara Co-operative Sale Societies.*

The Sub-Committee considered the request of the Director of Agriculture, Punjab, for a grant of Rs. 5,000 per annum for three years to meet part salary of the staff for organising one or two Zemindara Societies on the lines of the Okara Zemindara Association for marketing of all crops including pure Punjab-American cotton. The Sub-Committee recommends this grant on the following conditions:—

(*i*) that the Punjab Government gives an equal grant for the same period,

(*ii*) that the Co-operative Sale Societies guarantee to undertake, from the outset, the sale of pure, graded American *kapas* and that, as soon as possible, they will also organise the separate ginning and baling of pure American cotton (normally this stage should begin from the third year),

(*iii*) that the Committee's grant will be spent entirely on expert managing staff for the Societies and for organising staff, and

(*iv*) that if the scheme, as now modified, be accepted by the Punjab Government, a detailed budget will be presented for the sanction of the Standing Finance Sub-Committee.

Rohilkhand and Bundelkhand (United Provinces) Cotton Survey Scheme.—This scheme aims at making an exhaustive survey of the cottons of Rohilkhand and Bundelkhand. The Sub-Committee recommends the sanction of this scheme for a period of three years at a total estimated cost of Rs. 15,800.

Bengal Comilla Cotton Scheme.—The Sub-Committee considered and approved the proposals put forward by the Director of Agriculture, Bengal, for the improvement of Comilla cotton. A grant of Rs. 18,540 spread over a period of five years is recommended.

Madras Nadam Cotton Breeding Scheme.—The Sub-Committee considered the proposal submitted by the Director of Agriculture, Madras, for carrying out selection work on Nadam cotton grown in the Coimbatore and Salem districts with a view to evolve a high yielding annual type. The Sub-Committee recommends the grant of Rs. 13,730 for this scheme spread over a period of five years subject to review at the end of three years and also to the Local Government providing the necessary land.

Navsari Seed Storage Scheme.—The proposal submitted by the Director of Agriculture, Baroda State, for starting seed depots of 1027 A.L.F. in those parts of Navsari District not served by the seed stores of the Bombay Agricultural Department in Surat District was considered. The Sub-Committee recommends the scheme for sanction subject to the modification that the grant for items 1 to 6 under "IV—Contingencies" amounting to Rs. 2,200 per annum is paid only for the first two years of the Scheme, and subject to the condition that not later than 1934 the State would make its own seed multiplication arrangements in the Navsari District to the extent of 1,000 to 2,000 acres.

(2) Extensions of old Schemes.

Gujerat Boll-worm Clean-up Scheme.—The Sub-Committee approved the progress report and the procedure adopted and the efforts made in this important work. The Sub-Committee regrets to note, however, that a large area was not cleaned by pullers before the middle of May as was originally intended and that an area of 1,167 acres was left entirely untouched. The Sub-Committee recommends the sanction of the grant of Rs. 65,674 asked for, but would like to stress three points :—

(1) that every effort should be made to complete the programme by the 15th May,

(2) that arrangements should be made to take boll-worm counts in areas which have not been affected by the present propaganda for comparison with cleaned-up areas, and

(3) that prizes should be awarded only to those villages where uprooting of cotton plants has been completed by the 15th May, and that items (9) and (10) under "III-Contingencies" be merged in item (11) "Emergency Reserve".

Punjab Entomological (Pink Boll-worm) Research Scheme.—The Sub-Committee recommends that this scheme should be extended for a period of one year and that the report on the biological work carried out up to the end of the cotton season, 1932–33, should be submitted at the July 1933 meeting of the Committee. Definite proposals for further work should be submitted at the January 1934 meeting together with a report on the Pink Boll-worm survey work during the cotton season, 1933.

Hyderabad Seed Distribution Scheme.—The Sub-Committee considered the proposals put forward by Mr. Collins for an extension of this scheme for a period of three years from the 1st March 1933. The Sub-Committee is convinced that these proposals deserve full support in view of the great efforts being made by Mr. Collins to establish an area of superior cotton in the Raichur protected zone. The Sub-Committee recommends a total grant of Rs. 17,400 on the basis that the Inspector will draw only Rs. 160—10—180.

Dharwar Cotton Wilt (Writing-up) Scheme.—The Sub-Committee agrees to the extension of the writing-up period up to the end of March 1933 at a total estimated cost of Rs. 1,852.

Comparative tests between 1027 A.L.F. and 1A Cottons in Navsari District.—As it was uncertain whether these tests would be repeated in the season 1933–34, the Sub-Committee decided that the proposals should be put up, if necessary, at the July meeting of the Committee.

C. REPORT OF THE AGRICULTURAL RESEARCH SUB-COMMITTEE ON RESEARCH STUDENTS.

The Sub-Committee considered and approved the final reports on the enquiries into :—

(1) local consumption of *kapas*,
(2) cost of production of cotton by survey method,
(3) cost of transport of *kapas* from villages to the Lyallpur market, and
(4) the sources of seed supply of cotton jointly carried out by Bhai Partap Singh Bhullar and Bhai Ajaib Singh Gulzar in the Lyallpur District during the seasons, 1930–31 and 1931–32.

The Sub-Committee considered and approved the progress reports and programmes of work of the following research students (Cotton Marketing and Economics) :—

(1) Mr. Doraiswamy Iyer (Coimbatore).
(2) Mr. K. R. Dube (Nagpur).
(3) Bhai Santokh Singh Jaggi (Lyallpur).

The Sub-Committee recommends that the scholarship of the following research students be extended as follows :—

(1) Mr. Bholanath (Indore)—1st June 1933 to 31st May 1934 at Rs: 125 p.m.
(2) Mr. Brajandra Nath Bhargava (Lucknow)—1st April 1933 to 31st March 1934 at Rs. 125 p.m.
(3) Mr. Madan Lal Bhatia (Lyallpur)—1st April 1933 to 31st March 1934 at Rs. 125 p.m.

Foreign Scholarships.—Applications for foreign scholarships submitted by Mr. R. L. M. Ghose and Mr. V. G. Panse were considered by the Sub-Committee and it was decided not to recommend these scholarships for the consideration of the full Committee.

D. GENERAL.

The Sub-Committee approves of the purchase of a Balls Sledge Sorter and a Torsion Micro Balance at an estimated cost of Rs. 1,000 for the use of the Technological Assistant at Surat.

The Sub-Committee approves of the provision of the additional grant of Rs. 895 for the Madras Fodder Cholam Scheme as asked for by the Director of Agriculture, Madras.

The Sub-Committee approves of the provision of an additional sum of Rs. 2,885 for the Broach scheme in 1932–33 and also recommends the supplementary grant of Rs. 6,111 for the Jalgaon Scheme, spread over a period of five years from 1932–33 to 1936–37, as asked for by the Director of Agriculture, Bombay.

The Sub-Committee postponed the consideration of the replies received from the Hubli and Gadag Co-operative Cotton Sale Societies Ltd. to the next meeting to enable Dr. Burns to go into the matter fully.

Fundamental Research on Cotton Wilt.—The Sub-Committee recommends that the Institute of Plant Industry, Indore, should undertake fundamental research on cotton *wilt* and that Mr. Jackson should accordingly submit the necessary proposals for the approval of the Board of Governors of the Institute at their forthcoming meeting.

APPENDIX XXIV.

SUBJECT 36.—*Technological Research.*

SUMMARY OF PROGRESS REPORT (No. 19) OF THE DIRECTOR, TECHNOLOGICAL LABORATORY, MATUNGA, BOMBAY.

INTRODUCTION.

The present report gives an account of the work done at the Technological Laboratory from the 1st June 1932 to 31st October 1932. Owing to the fact that in the past fewer samples have been received during the period under review as compared with the first seven months of the year, it has been usually referred to as the "slack period". It will, however, be seen from a perusal of this report that, if due allowance is made for the shorter term covered by this period, samples were received at the Technological Laboratory at the same rate as during the first seven months of the year and the old distinction between the "busy period" and the "slack period" has, therefore, ceased to exist. Besides the testing of these samples, good progress was made in the research work of the Laboratory. The different activities of the Laboratory relating to the testing of agricultural and other samples and the progress in the research work will now be described under the following five heads :—

I. Spinning Laboratory.
II. Research Laboratory.
III. Moisture Testing Section.
IV. Publications.
V. General.

I. Spinning Laboratory.

The following table gives, in a summary form, the distribution of samples received for tests up to 31st October 1932 together with the figures for the corresponding period of the previous year.

Table I.

	1st June 1932 to 31st October 1932.	1st June 1931 to 31st October 1931.
Agricultural Departments	113	42
Standard cottons	1	....
Trade samples	23	19
Fibre tests samples	34	66
Yarn tests samples	40	....
Special tests samples	8	4
Total ..	219	131

It will be seen from the above table that from the Agricultural Departments alone nearly 3 times as many samples were received during the period under review as in the corresponding period of last year and that in almost all other cases there has been a marked increase. The increase in the total number of samples received over the corresponding figure for the last year is 67 per cent. It is interesting to recall in this connection the fact that last year, too, witnessed an increase of 64 per cent. over the corresponding figure for 1929–30. Thus, in two years since 1929–30, the number of samples received for tests during the latter half of the season has risen from 80 to 219—an increase of 174 per cent. It was mentioned in my Progress Report No. 18 that the total number of samples received during the first 7 months of the current year was 301, which gave an average of 43 samples per month. During the five months under review 219 samples were received, or an average of 44 samples per month. The number and distribution of samples, lots and counts actually spun during the period under review are given in the following table, together with the corresponding figures for the last year :—

Table II.

	Samples		Lots		Counts.	
	1st June 1932 to 31st October 1932.	1st June 1931 to 31st October 1931.	1st June 1932 to 31st October 1932.	1st June 1931 to 31st October 1931.	1st June 1932 to 31st October 1932.	1st June 1931 to 31st October 1931.
Bombay	59	21	59	21	172	67
Punjab	16	27	16	27	48	78
United Provinces ..	5	..	5	..	10	..
Madras	11	35	12	35	41	108
Central Provinces ..	..	..	..	..	..	..
Miscellaneous	32	24	32	24	95	72
Total ..	123	107	124	107	366	325
Standard	1	..	2	..	8	..
Trade tests	31	23	35	47	97	109
Technological tests ..	53	12	54	16	82	48
Grand total ..	208	142	215	170	553	482

It will be seen from the above table that there has been a marked increase in the number of samples spun under each of the different classifications, viz., agricultural samples, trade samples and technological samples, the increase in the total number over the corresponding figure for the last year being 46 per cent. The average number of samples spun per month for the period under review rose from 28 for last year to the high figure of 42 for the current year.

The following table shows the distribution of the spinning test, fibre test and yarn test reports, issued during the period under review, on samples submitted for tests, together with the figures for the corresponding period of last year.

Table III.

Reports.	1st June 1932 to 31st October 1932.	1st June 1931 to 31st October 1931.
Spinning Test Reports	41	39
Fibre Test Reports	7	10
Yarn Test Reports	2	..
Total ..	50	49

It will be seen that, in spite of the large increase in the number of samples actually spun, the total number of test reports issued on these samples does not show any increase. This is simply due to the fact that efforts are now made to include as many samples as possible in one report so as to economise the work of the staff. A few general remarks under each head will bring out the special features of the tests made during the period under review.

Agricultural Samples.—These samples are supplied by the various provincial Agricultural Departments in connection either with their selection work or their botanical and physiological experiments and form the bulk of the samples received for tests at the Technological Laboratory. During the period under review their number amounted to 52 per cent. of the total. Of these, mention should be made of some 40 samples of 1027 A.L.F. and Selection 1A which have been received in accordance with the decision of the Committee that, before arriving at any final decision as to the cotton policy in Gujerat, thorough tests should be made at the Technological Laboratory on samples of these two cottons grown in the cultivators' fields in different parts of Gujerat.

Another noteworthy series of samples falling under this head are 9 mixings of Karunganni and Pulichai cottons received from the Superintendent, Agricultural Research Station, Koilpatti. It will be recalled that early this year a Technological Bulletin was issued which contained the results of spinning tests on mixings of several Indian cottons including Karunganni and Pulichai. Unlike the mixings, recently reported upon in the Technological Bulletin, Series A, No. 20, the exact proportions of Pulichai are known, in the case of the present series which will be tested as opportunity permits. Similarly, mixings prepared from 4F and 289F have been supplied by the Cotton Research Botanist, Lyallpur, and will be tested again.

Banilla Cotton.—It was stated in my Progress Report No. 18 that 19 samples of Banilla cotton, grown in Khandesh in the cultivators' fields, were received and tested last year with a view to ascertaining the present-day quality of this cotton and to seeing whether any deterioration in quality has set in since its seed was distributed for general cultivation. Owing to the importance of these tests to the Agricultural Department as well as the trade, it was decided to repeat them in the current season and include the results of the repeat tests in a Technological Bulletin on Banilla cotton. The number of samples received from the 1931-32 crop was rather less than last year, but as the tests generally gave parallel results, the results of both series of experiments have now been described in detail in the Technological Bulletin, Series A, No. 22, which has been issued.

Fibre Tests.—The small samples for fibre tests were mostly received from (1) the East India Cotton Association and (2) the Cotton Research Botanist, Parbhani, Hyderabad-Deccan. The former sent 9 samples of African cottons, A.R. Kampala, A.R. Busoga and A.R. Jinja, which were tested in order to help the Association in laying down suitable standards of length for African cottons. The Parbhani samples are either selections from the Hyderabad-Gaorani and Parbhani cottons or imported varieties from America and Egypt which are under trial for acclimatisation in Hyderabad-Deccan. Some of these strains have given very promising results and when available in sufficiently large quantities, are well worth a comparison by spinning tests with the best Indian cottons available at present in the market.

Trade Tests.—These samples are being tested in accordance with the arrangement entered into between the Indian Central Cotton Committee on the one hand and the East India Cotton Association and the Bombay and Ahmedabad Millowners' Associations on the other. During the period under review 21 such samples were received from the East India Cotton Association and reported upon in 8 two-page Technological Circulars as follows :—

Table IV.

Cotton.	Technological Circular No.	Date of issue.
Surat	74	10th June 1932.
Navsari		
Punjab-American	75	Do.
Jagadia Farm		
Navsari		
Dholleras	76	1st July 1932.
Westerns		
Farm Westerns		
Kumpta		
Bijapur	77	25th July 1932.
Tinnevelly		
Upland	78	26th July 1932.
Cambodia		
Karunganni		
Kadi Viramgam	79	30th August 1932.
Khandesh		
Kalagin	80	Do.
Bagalkote		
A.R. Kampala	81	15th October 1932.
A.R. Busoga		
A.R. Jinja		

In addition to these, mention may be made of the following samples on which special tests were made :—

A sample of Porbunder cotton submitted by a local mill was found to yield, with the normal blow-room treatment, extremely leafy yarns. Different lots of it were given increasingly rigorous treatment in the blow-room, the spinning behaviour of the cotton under these conditions was observed, yarns spun from each lot were examined from the view-point of freedom from leafiness and any possible loss of strength and a detailed report on the results of these tests was issued. A sample of Sudan Sakel cotton, supplied by an Ahmedabad mill, was of special interest to the Laboratory as representing a long staple type, which is being tested here in ever-increasing numbers. Tests were made on several lots of this cotton with a view to ascertaining the optimum treatment which, while removing bulk of the foreign matter, caused the minimum possible injury to the fibre and thus gave the best type of yarns.

Mention may also be made of a sample of spindle banding, manufactured from a high grade cotton by an Ahmedabad mill, which was sent to the Laboratory for comparative tests. This sample of banding was examined for strength and durability and its behaviour under normal working conditions was compared with that of the banding which is ordinarily used in the Laboratory ring frames.

A detailed report, embodying the results of these tests and observations with some suggestions for improvement, was sent to the mill concerned.

Standard Indian Cottons.—During the period under review the Bulletin containing the Technological Reports on Standard Indian Cottons was issued.

Three points are worthy of mention in this connection. In the first place J. N. 1., Dharwar 1 and Cambodia Co. 1 have been deleted from the list of standard cottons, the former because it has gone out of cultivation and the latter two because they have been replaced by better varieties, viz. Jayawant and Cambodia Co. 2. It should be stated here that at the recommendation of the United Provinces Agricultural Department, it has been decided to treat C 402 as a Standard Indian Cotton from the next year in place of J. N. 1, which has gone out of cultivation. Secondly fresh samples of American cottons representing the present-day crop were obtained and tested. These samples were kindly supplied by Messrs. E. D. Sassoon & Co., and the results of tests carried out on them were included in the Standard Indian Cotton bulletin for purposes of comparison with the good quality Indian cottons. Thirdly a new statistic called "Fibre-length irregularity" has been calculated for the standard cottons of the last three seasons and the values of this statistic have been incorporated in the Bulletin. This statistic is a measure of the percentage of short fibres present in a cotton, which on the one hand help to increase its waste losses and, on the other, are responsible for reducing its spinning performance. As a knowledge of their percentage is a matter of some importance to the practical spinner, it is hoped that this additional information regarding the standard cottons will be useful to the trade.

African Cottons.—It has been mentioned above that fibre tests are being made on samples of African cottons selected and submitted by the Standards Committee on African cottons of the East India Cotton Association. In addition to these, 8 samples, weighing from 3¼ lbs. to 11½ lbs. were received for spinning tests from the Agricultural Officer, Bukalasa Experiment Station, Uganda, and are being tested in accordance with the decision of the Committee.

Combing of good quality Indian cottons.—The experimental part of this problem consisting of spinning tests and fibre tests on Cambodia, Nandyal 14, 1027 A.L.F. and P.A. 289F. has now been completed. In addition to spinning fine counts, ranging from 50's to 80's on the ordinary and 4-roller high draft systems from the combed material comparatively coarse counts, ranging from 12's to 16's, have been spun from the comber waste mixed with a suitable cotton. Numerous tests have been made on the fibre properties of the raw material, the combed sliver, the comber wastes, etc. in order to correlate, if possible, the improvement in the spinning quality of a cotton with the extraction of the comparatively short and coarse fibres. The results of this work are now being written up in the form of a Technological Bulletin.

Balanced and Unbalanced Drafts using mixings of two or more cottons.—This investigation was taken in hand as a continuation of the experiments performed at the Laboratory some time ago on the effects of using balanced and unbalanced drafts on the quality of yarns spun from standard Indian cottons. For this purpose, mixings with varying proportions were made from the following pairs of cottons :—

Cambodia Co. 1 and Wun.

Kampala and Surat 1027 A.L.F.

P.A. 289F and P.A. 4F.

Each mixing is divided into four lots, duplicate lots being used for balanced and unbalanced drafts, and each lot is spun into two or three suitable counts. This work is in progress.

Settings and Twists in the Fly Frames.—This problem formed one of the items of the programme of future work approved by the Committee. For this purpose three Indian cottons, viz. K.22, 4F and 1027 A.L.F., representing short, medium and long staple, Indian cottons, were selected and spun with different settings and twists in the fly frames the other details of treatment being kept as nearly constant as possible. The experimental portion of this work has been completed and the results will be published in the form of a Technological Bulletin as soon as possible.

Work on Carding Problems.—Good progress has been made, during the period under review, in the exhaustive work which is being done in order to ascertain the influence of different settings of the more important organs of the card on the quality of yarns spun from representative types of Indian cottons and the inter-relationship between the settings and the major fibre-properties of the cottons. As mentioned in my last report, which gave an outline of this work, it involves not only numerous spinnings with different settings, but also the determination of the fibre-properties of the raw material on the one hand and the card sliver and waste on the other for each setting. The work is, therefore, of a time-absorbing nature but it is hoped that the next year will see the completion of its experimental part.

Leaflets on Harmful Effects of adulterating good quality Indian cottons and on the Green Stained Sind-American cotton.—It will be recalled that in my Progress Report No. 18 an account was given of tests which were made on mixings of long staple and short staple Indian cottons and on green-stained Sind-American cotton grown in the Jamrao Canal areas of Sind. The Technological Research Sub-Committee, after considering the results of these tests, decided that small leaflets describing the salient features of these results should be published and broadcast to the trade. This has been done.

II. Research Laboratory.

Fibre Testing Section.—This section has been kept fully occupied with the determination of fibre properties of samples received for spinning tests and fibre tests. In addition to these two types of samples, the testing of samples in connection with the work on carding and combing problems, which naturally devolved upon this section, has claimed a portion of the time of the assistants deputed to it.

Mr. Hari Rao has continued to supervise the work of this section and has, in addition, made good progress in his investigation of the effect of twist on the strength and extension of single cotton hairs. It was mentioned in my last Progress Report that Mr. Hari Rao, in collaboration with Mr. C. Nanjundayya, had carried out an investigation on the effect of variation in humidity on the weight of a cotton hair. On an analysis of the results of this work it was found that repetition of some of the experiments was desirable. These particular experiments which require repetition before the results of this investigation are published will be taken in hand as soon as the atmospheric conditions are favourable.

Physics Section.—In collaboration with Mr. R. P. Richardson, Mr. D. F. Kapadia is engaged in the investigation of the effect of different settings of the carding engine, on the regularity of card sliver, percentage of waste losses, quality of yarns spun, etc., to which a reference has been made above.

Mr. C. Nanjundayya has devoted part of his time to further tests with and the final designing of the new Cotton Fibre Testing Apparatus to which a reference was made in my last Progress Report. During the rest of the time he was employed in his investigation on the relationship between the length-grade of cotton fibre and their tensile strength. He is now extending these investigations to long staple non-Indian growths such as Uganda, Sudan Sakel and Egyptian Sakel. For the purpose the apparatus had to be modified so as to become suitable for these long staple cottons but the modifications have now been effected and the experiments are well under way.

Mr. R. N. Mathur, who was appointed Temporary Research Assistant, has been engaged on a study of the ribbon-width of cotton hairs of the different representative types of Indian growths, and its relationship with the fibre-weight of a cotton. An apparatus was designed which is attached to a microscope and by means of which it was possible to rotate the cotton hair through a known angle while still under observation. With this new apparatus Mr. Mathur has so far tested six Indian cottons and will carry on this work on a few more cottons until sufficient data is available for analysis and correlation.

Chemistry Section.—Mr. D. L. Sen has been engaged for part of the time in continuing his investigation on the chemical analysis of different parts of the kernel and seed-coat of the cotton seed. This work is in progress. Mr. Sen has, in addition, undertaken an investigation on the chemical analysis of cotton fibre obtained from lint which has been grown from the same seed under as nearly the same conditions as possible but with different doses of manure. Such samples of cotton have been received from time to time at the Technological Laboratory with a view to ascertaining the effect of different doses of manure on the spinning quality of a cotton. In addition to these, Mr. Sen has also undertaken another investigation on the relationship between the feel of a cotton and the wax content of its fibre. That the feel of a cotton should be connected in some manner with its wax content is obvious, but hitherto no relationship has been worked out between the two important characteristics. This problem has been undertaken at the suggestion of Mr. R. G. Saraiya who has very kindly agreed to supply samples ranging from very rough to very silky cottons suitable for this investigation. Hitherto five samples have been tested for this purpose and it is proposed to extend this work to another seven samples as and when these become available with the arrival of the new crop.

Microscopy Section.—Mr. A. N. Gulati has been engaged in designing an apparatus suitable for recording the number of neps in a given length of yarn, thereby reducing the personal error involved in a determination of this characteristic and making it possible for him to correlate his results on the percentage of mature hairs in different cottons with yarn-neppiness. He has also carried out numerous tests on the percentage of mature hairs in many agricultural samples for which the demand seems to be increasing every day. Mr. Gulati has also undertaken an investigation on the relationship between the percentage of mature hairs and strength of cotton. He has hitherto tested six cottons for this purpose and is continuing these tests on some more Indian cottons.

III. Moisture Testing Section.

It will be recalled that since last year moisture tests are being made on samples drawn from ordinary commercial bales as they are received in Bombay. These tests form an extension of the experiments on moisture content of samples drawn from specially pressed bales and are being undertaken with a view to meet the possible objection that the conditions under which these special bales were pressed did not represent those prevailing in actual practice. The East India Cotton Association was requested to give facilities in the matter of drawing out samples for the second series of tests. During the period under review this series of tests was completed and now results are available, on the one hand of the investigation on the variation in the moisture content of bales of different descriptions stored under monsoon conditions in Bombay and, on the other, of the work on the moisture content of bales pressed under special supervision and the moisture content of bales pressed for commercial purposes. The main conclusions of the last two investigations were placed before the Moisture Tests Sub-Committee of the East India Cotton Association which placed on record its appreciation of the work done by the Technological Laboratory in this connection as will be seen from the following letter received from the Secretary of the Association :—

> "I am directed to inform you that the Moisture Tests Sub-Committee appointed by the Board of Directors of my Association have placed on record their sense of appreciation of the very useful work done by the Technological Laboratory, and, especially, by you in connection with the experimental tests with a view to ascertaining the normal moisture content in cotton bales which have proved to be of considerable help both to the cotton trade and cotton industry and to convey to you their best thanks for the time you have devoted and the trouble you have taken in the work of carrying out such tests."

The Sub-Committee noted with special interest that, on the whole, the moisture content of Indian cottons, even in the commercial bales, was found to be one to two per cent. less than of the American or Egyptian growths, and, in view of the great importance of these tests to the trade, resolved that the Technological Laboratory should be asked to continue moisture tests on commercial bales in the next season. The results of the experiments on the variation in the weight of a bale under different atmospheric conditions of humidity are being written up in the form of a Bulletin.

IV. Publications.

The following is the list of the Technological Bulletins, Leaflets and Circulars issued during the period under review :—

Bulletins—

(1) Technological Bulletin Series A, No. 21—"Technological Reports on Standard Indian Cottons, 1932", by Nazir Ahmad, M.Sc., Ph.D.

(2) Technological Bulletin Series A, No. 22—"Technological Report on Banilla Cotton, 1930-32", by Nazir Ahmad, M.Sc., Ph.D.

(3) Technological Bulletin Series B, No. 15—"Examination of a Proposed Relationship between the Lea Test and the Single Thread Test Results", by V. Venkataraman, M.A., and Nazir Ahmad, M.Sc., Ph.D.

Leaflets—

(1) Note on the harmful effects of adulterating good quality cottons.

(2) Note on green stained Sind-American cotton.

Circulars—

Nos. 74 to 81 (as given on page 122).

V. General.

Visit of the Indian Tariff Board.—The President and members of the Indian Tariff Board paid a visit to the Laboratory on the 28th June 1932. They were received by Mr. S. D. Saklatvala, Mr. P. H. Rama Reddy and the writer, and were taken round the different sections of the Laboratory. They evinced keen interest in the research work of the Laboratory and spent nearly two hours discussing its theoretical and practical aspects.

Staff.—Messrs. M. A. Gangat, B.Sc., and C. T. Korula, L.T.M., were appointed temporary Junior Testers for a period of three months from 22nd September 1932 to cope with the large increase in the number of samples received for tests.

Mr. V. Venkataraman, Statistician, was appointed as Personal Assistant for a period of six months from 1st September 1932.

Equipment.—Messrs. Henry Maynell & Co. kindly offered to supply a sufficiently large number of their W. T. R. high draft units to equip one side of our ring frame. This offer was accepted with thanks on the explicit understanding that the name of the manufacturers will not be divulged in any of the Bulletins describing the results of tests carried out with their system. The units have been received and will be used in future tests on high draft spinning.

The local Agents of the Casablancas High Draft System kindly offered to supply, free of charge, their new cages in place of the old ones for one side of the ring frame which is fitted with their system. This offer was accepted with thanks.

Acknowledgments.—It gives me pleasure to acknowledge the valued assistance of the research, testing and clerical staff of the Laboratory, from whom I have continued to receive wholehearted support and co-operation.

(Signed) NAZIR AHMAD,
Director,
Technological Laboratory.

Dated the 12th December 1932.

APPENDIX XXV.

SUBJECT 37.—*Technological Research—Report of the Technological Research Sub-Committee.*

The Director's Progress Report for the five months ending 31st October 1932 was considered by the Technological Research Sub-Committee and approved. The period under report shows a remarkable increase in the number of samples received for tests, so much so that the old distinction of June to October being a "slack period" has completely disappeared, and on the average 44 samples a month were received during this period as against 43 during the preceding seven months. Two hundred and seven (207) samples were spun in 213 lots and 545 counts during the period as compared with 142 samples spun in 170 lots and 482 counts during the corresponding period of the previous year. Fifty spinning, fibre and yarn test reports were issued during the same period as against 49 during the corresponding period of the previous year.

The combing experiments on Cambodia, Nandyal 14, 1027 A.L.F., and 289F cottons have been completed, as also the spinning tests on K. 22, 4F and 1027 A.L.F. with different settings and twists in the fly frames. The results of both sets of experiments are expected to be published shortly. Investigations on (1) the effects of using balanced and unbalanced drafts on the quality of yarns spun and (2) the influence of different settings of the more important organs of the card on the quality of yarns spun are in progress.

In addition further tests with the new Cotton Fibre Testing Apparatus, designed at the Laboratory, and the designing of an apparatus suitable for recording the number of neps in a given length of yarn were in progress.

As recommended by the Sub-Committee at its last meeting, and approved by the Indian Central Cotton Committee, the experiments on the normal moisture content of Indian cottons are, at the instance of the East India Cotton Association, being continued. The Sub-Committee decided that the results of tests on Porbandar and Sudan Sakel

cottons, with different blow-room treatments, should be published in the form of a leaflet. The Sub-Committee further decided that, in future, the results of all such tests, which may be of interest to the trade and industry, may also be published in the form of leaflets.

(2) The Sub-Committee considered the budget for 1933-34 and approved :—

(*i*) the creation of an additional post of Junior Tester in the grade of Rs. 75—90—10—150 from the 1st March 1933 ;

(*ii*) the creation of a temporary post of a Junior Tester on Rs. 90 for three months ;

(*iii*) the extension, for another year from 1st March 1933, of the temporary post of Personal Assistant carrying only a duty allowance of Rs. 50 per mensem, and its being offered to Mr. V. Venkatraman, the Statistician ;

(*iv*) the grant of a duty allowance of Rs. 25 to Mr. H. B. Joshi for holding charge of the Yarn Testing Section for such time as Mr. Venkatraman holds the post of Personal Assistant ; and

(*v*) the extension of Mr. R. N. Mathur's appointment as Temporary Research Assistant for another year.

(3) The Sub-Committee confirmed its previous recommendation that the investigation into the causes of deterioration of stored cotton at Karachi should be carried out.

(4) The Sub-Committee approved the purchase of a Jack Roving Frame at an estimated cost of Rs. 900.

(5) The Sub-Committee decided that the request of Mr. L. N. Mathur in its present form should be refused.

TECHNOLOGICAL LABORATORY.

Budget for 1933-34.

——	Sanctioned Budget, 1932-33.	Revised Estimates, 1932-33.	Budget, 1933-34.	Remarks.
I. *Superintendence.*	Rs.	Rs.	Rs.	
1. *Director* (1,500—100—1,700)—				
Salary	19,100	17,190	20,300	
Provident Fund ..	1,591	1,591	1,692	
2. *Office Establishment*—				
(*i*) Salary (150—10—200) ..	2,270	2,043	2,390	
Provident Fund ..	189	189	199	
(*ii*) Salary (120—5—150) ..	1,785	1,543	1,460	
Provident Fund ..	149	99	101	
(*iii*) Salary (120—5—150) ..	1,510	1,489	1,570	
Provident Fund ..	126	126	131	
(*iv*) Salary (80—5—120) ..	Provision	made	980	
Provident Fund ..	under	Research	68	
	Laborato	ry.		
(*v*) Leave salary ..	..	..	533	(1/12 of Establishment pay).
(*vi*) Additional income-tax payable from 10 per cent. cut.	..	415	..	
Carried over ..	26,720	24,685	29,424	

	Sanctioned Budget, 1932–33.	Revised Estimates, 1932–33.	Budget, 1933–34.	Remarks.
	Rs.	Rs.	Rs.	
Brought forward ..	26,720	24,685	29,424	
I. *Superintendence*—contd.				
3. *Contingencies*—				
(*a*) Pay of Menials ..	350	595	653*	*Provision made for an additional post of peon.
Provident Fund ..	..	36	54	
(*b*) Leave salary ..	..	..	54	
(*c*) Other contingencies ..	2,500	2,500	2,500	
4. Temporary Establishment ..	500	..	..	
5. Travelling allowance ..	1,500	1,500	1,500	
6. Publications—Printing ..	6,000	6,000	6,000	
Total ..	37,570	35,316	40,185	
II. *Spinning Laboratory.*				
1. Spinning Master (700—50—800—850—50—950)—				
Salary	11,400	10,460	11,400	
Provident Fund	950	950	950	
Furniture allowance ..	200	200	200	
2. Electrician—				
Salary (100—10—200) ..	2,130	1,917	2,250	
Provident Fund ..	177	177	187	
3. Fitter Jobber—				
Salary (100—110—130—10—200).	2,160	1,944	2,280	
Provident Fund ..	180	180	190	
4. Clerk (75—5—100—104—4—130)—				
Salary	1,304	1,174	1,352	
Provident Fund	108	108	113	
5. Leave salary	..	..	113	5 per cent.
6. Contingencies—				
Additional income-tax payable from cut.	..	248	..	
(*a*) Pay of Spinning Operatives.	3,074	3,100	3,028	
Provident Fund ..	..	218	254	
(*b*) Pay of Menials ..	1,250	1,232	1,208	
Provident Fund ..	..	51	63	
(*c*) Leave salary	..	..	353	1/12th.
(*d*) Municipal Taxes ..	850	850	850	
(*e*) Insurance	700	514	600	
(*f*) Annual repairs and maintenance.	500	400	500	
(*g*) Other contingencies ..	2,000	2,000	2,000	
Total ..	26,983	25,723	27,891	

—	Sanctioned Budget, 1932-33.	Revised Estimates, 1932-33.	Budget, 1933-34.	Remarks.
III. *Research and Testing Laboratories.*	Rs.	Rs.	Rs.	
1. Senior Research Assistant—Chemist—				
Salary (350—25—650) ..	6,200	5,580	6,500	
Provident Fund	517	517	542	
2. Senior Research Assistant—Assistant Technologist—				
Salary (350—25—650) ..	5,450	4,905	5,750	
Provident Fund	454	454	479	
3. Senior Research Assistant—Physicists (2) (1 temporary)—				
Salary (350—25—650) ..	10,100	11,150	11,900	
Provident Fund	842	792	881	
4. Junior Research Assistants (Two)—				
Salary (250—25—350—25—500).	6,740	6,066	8,465	
Provident Fund	562	562	706	
5. Statistician (250—25—350—25—500)—				
Salary	4,800	4,320	5,100	
Duty allowance as Personal Assistant at Rs. 50 per mensem.	..	300	600	
Provident Fund	400	425	475	
6. Temporary Research Assistants (Two).	3,620	2,709	2,400	
7. Statistical Clerks (2)—				
Salary (90—10—150) ..	3,030	2,727	3,270	
Provident Fund	252	252	272	
8. Junior Testers (16)—				
Salary (90—10—150) ..	23,960	21,564	26,120	
Duty allowance for one Tester at Rs. 25 per mensem.	..	..	300	
Provident Fund	1,997	1,997	2,202	
9. Instrument Maker—				
Salary (100—10—150) ..	1,800	1,620	1,800	
Provident Fund	150	150	150	
10. Draughtsman—				
Salary (90—10—150) ..	1,800	1,620	1,800	
Provident Fund	150	150	150	
11. Laboratory Keeper—				
Salary (80—5—120) ..	960	288	..	Provision made under Superintendence.
Provident Fund ..	60	..	..	
Additional income-tax payable from cut.	..	740	..	
Carried over ..	73,844	68,888	79,862	

	Sanctioned Budget, 1932–33.	Revised Estimates, 1932–33.	Budget, 1933–34.	Remarks.
	Rs.	Rs.	Rs.	
Brought forward ..	73,844	68,888	79,862	
III. *Research and Testing Laboratories*—contd.				
12. Temporary Establishment ..	810	674	270	
13. Contingencies—				
(*a*) Pay of Menials ..	1,340	1,371	1,350	
Provident Fund ..	..	56	84	
(*b*) Leave salary ..	..	..	113	1/12th.
(*c*) Municipal taxes ..	1,800	1,800	1,800	
(*d*) Insurance	600	454	500	
(*e*) Library	2,000	1,500	1,500	
(*f*) Annual Repairs ..	1,000	700	1,000	
(*g*) Other contingencies ..	1,500	1,500	1,500	
(*h*) Apparatus	5,000	5,000	5,000	
Total ..	87,894	81,943	92,979	
IV. *Reserve.*	5,000	1,000	5,000	
I. Superintendence ..	37,570	35,316	40,185	
II. Spinning Laboratory ..	26,983	25,723	27,891	
III. Research and Testing Laboratories.	87,894	81,943	92,979	
IV. Reserve	5,000	1,000	5,000	
Grand Total ..	1,57,447	1,43,982	1,66,055	

APPENDIX XXVI.

SUBJECT 39.—*Report of the Research Students Selection Sub-Committee.*

The Sub-Committee considered the question of awarding research studentships to men already in the service of Local Governments and the Committee had decided to divide scholarships into two groups, viz: Training grants and General scholarships. Training grants may be given to Government servants who have been recommended by their Provincial Governments and to Committee's servants provided they are considered fit by the Committee. The General scholarships will, as usual, be advertised throughout India and the best candidates will be selected. The Sub-Committee further recommends that no General scholarships should be sanctioned this year.

The Sub-Committee recommends that Mr. S. N. Venkatramanan be sanctioned a Training grant for a period of one year for training in Cotton Statistics under Prof. Mahalanobis at Calcutta and that the Standing Finance Sub-Committee be authorised to fix the rate of scholarship after considering the report from the Director of Agriculture, Madras, with regard to leave allowance admissible to Mr. Venkatramanan.

The Sub-Committee further recommends that a Training grant may likewise be sanctioned in the case of Mr. C. Jagannatha Rao for a period of one year, in the first instance, with the provision that it may be extended for another year at the end of that

period, for training in Cotton Physiology under Prof. Ekambaram in Madras, and that the Standing Finance Sub-Committee be authorised to fix the rate of scholarship after considering the leave allowance admissible to Mr. C. Jagannatha Rao from the Madras Government.

In view of the decision taken by the Sub-Committee that no general scholarships be granted unless it was by open competition, the question of granting scholarship for training in Physiological Chemistry for Sind was put off till next year.

APPENDIX XXVII.

SUBJECT 40.—*Report of the Standing Finance Sub-Committee—*

(*a*) *Balance Sheet.*

(*b*) *Financial Statement.*

(*c*) *Revised Estimates*, 1932-33.

(*d*) *Budget*, 1933-34.

(*e*) *Auditors' fees.*

Since the last meeting of the Indian Central Cotton Committee, the Standing Finance Sub-Committee held four meetings. The place of Mr. D. McCallum on the Sub-Committee was taken by Mr. J. O. G. Barnes who succeeded him on the Committee. At three meetings of the Sub-Committee, Dewan Bahadur Sir T. Vijayaraghavacharya was elected Chairman, as required by Rule 5 of the Rules under section 16 of the Indian Cotton Cess Act.

2. A Balance Sheet of the audited accounts of the Committee's funds and the Provident Fund as on the 30th September 1932, and also the Financial Statement * showing the position of the Committee's finances on the 31st December 1932, are submitted for information. Rs. 21,21,403-11-9 of the Committee's securities are invested in Government Paper and Rs. 6,13,040-10-0 in long-dated Corporation Bonds. As will be seen from the Financial Statement, the market value of the Committee's securities has appreciated by Rs. 1,03,930-14-3, but to finance all the schemes which are to be put in operation, it may be found necessary, in the near future, to sell some of them.

3. Revised Estimates of Receipts and Expenditure for the current financial year are submitted for approval. Cotton cess receipts up to the end of December 1932 amounted to Rs. 3,21,170 as against Rs. 4,29,322 for the corresponding period of the last year, the fall in revenue being due to decrease of cotton exports during the current year. The estimate of cotton cess receipts has, therefore, been reduced from Rs. 5,00,000 to Rs. 4,51,000. The figure under "Miscellaneous Receipts" has been raised from Rs. 1,500 to Rs. 51,500 due to the profit realised by the sale of 3½ per cent. and 4½ per cent. sterling loans of £16,000 and £24,000 respectively. The total expenditure for the year is now estimated at Rs. 9,18,989-5-9 as against Rs. 10,52,594-4-0 in August last; the decrease in expenditure of Rs. 1,33,604-14-3 being chiefly due to savings as detailed in the Revised Estimates. The Closing Balance (excluding recoverable loans amounting to Rs. 15,355-9-3) at the end of the current year will remain at Rs. 27,92,843-2-8, as compared with Rs. 30,59,883-1-8 at the end of the last year.

4. The Draft Budget for 1933-34 is also submitted for approval. The estimates of receipts from cotton cess have been retained at the same figure as in the original budget for 1932-33, viz., Rs. 5,00,000 and the figure under "Interest" has been reduced from Rs. 1,52,000 to Rs. 1,42,000 in view of the necessity which is likely to arise for the sale of some of the securities. Miscellaneous receipts have been raised from Rs. 1,500 to Rs. 2,500 provided in previous years, as experience has shown that the former figure is nearer to the actuals realised.

5. The Revised Estimates* for 1932-33 of the Publicity and Propaganda Department have been raised to Rs. 21,098-7-0 from Rs. 19,341 already sanctioned (Rs. 19,000 sanctioned by the full Committee at its last meeting and Rs. 341 sanctioned by the Standing Finance Sub-Committee in October 1932). The excess is due to additional requirements, chiefly for printing.

* Not printed.

6. The Draft Budget for 1933-34 of the Publicity and Propaganda section is likewise submitted for approval. The estimated expenditure amounts to Rs. 29,209 as against Rs. 21,089-7-0 in the revised estimates for 1932-33.

7. The Indian Central Cotton Committee at its last meeting appointed a Special Sub-Committee consisting of the President, Sir Purshotamdas Thakurdas, Dr. W. McRae, Mr. S. D. Saklatvala and Mr. T. F. Main to select suitable candidates for the posts of Cotton Botanists for the Punjab Botanical Research Scheme and the Bombay Co-ordination of Cotton Research Scheme, and authorised the Standing Finance Sub-Committee to consider the recommendations of the Special Sub-Committee and make the appointments. The Standing Finance Sub-Committee decided, as recommended by the Special Sub-Committee, to appoint for one year on probation Mr. Mohammad Afzal as Cotton Research Botanist in the Punjab on a salary of Rs. 600 per mensem with free quarters, provision being made for revision of his salary at the end of the period if he is confirmed. On the suggestion of Mr. Main, it also agreed that the appointment of the Co-ordinating Officer in the Bombay Presidency should be put off till the return from leave of Dr. W. Burns who served on the Selection Committee appointed in London by the High Commissioner for India for selection of candidates for the above two posts. The Selection Sub-Committee was unable to meet again on Dr. Burns return to India owing to Sir Purshotamdas Thakurdas having proceeded in the meanwhile to England to attend the Round Table Conference. The Sub-Committee will assemble again soon.

8. At its meeting held on the 7th December 1931, the Standing Finance Sub-Committee decided to recommend to all Directors of Agriculture to follow the lead given by the Government of India in the matter of the emergency cut of 10 per cent. in the salary of its servants, employed both in provinces and Indian States and this was approved by the full Committee in December 1931. In reply to this decision, Mr. B. A. Collins, Director-General and Secretary to Government, Department of Commerce and Industries, His Exalted Highness the Nizam's Government, made a recommendation to the Committee that the cut in the pay of Rai Saheb Kalidas Sawhney be given effect to from the 1st May 1932, as was the case with Government officers, in foreign service. The Sub-Committee thought it undesirable, in the interest of the Committee, to make any distinction in favour of any of its servants and decided that the cut in the pay of Rai Saheb Kalidas Sawhney should take effect from the 1st December 1931 as in the case of all other Committee's servants.

9. The Standing Finance Sub-Committee consider the request of the Director of Agriculture, Bombay, for a ruling as to how the leave salary of the Committee's servants working under the provincial Governments should be met after the expiry of the scheme on which they were employed. The Sub-Committee decided that, in view of the Committee's decision at its last meeting sanctioning leave to Mr. Nangpal after the expiry of the scheme on which he had been employed, the leave salary of the Committee's servants whose services terminated on the expiry of the Scheme should be met from a special grant and that a necessary provision should be made in future in schemes themselves for leave-salary.

10. At its meeting held in December 1931, the Indian Central Cotton Committee decided to provide a sum of Rs. 10,000 in the budget of the current year for the initial expenses of a joint investigation with the Imperial Council of Agricultural Research into the cost of production of cotton, sugarcane and rotation crops and appointed a Special Sub-Committee to discuss the scheme with the Imperial Council of Agricultural Research. The Joint Sub-Committee of the Indian Central Cotton Committee and the Imperial Council of Agricultural Research which met at Simla in August last discussed in detail a three years' scheme and decided that the total cost of Rs. 4½ lakhs should be shared equally by the two bodies. The Standing Finance Sub-Committee agreed to the recommendations of the Joint Sub-Committee, but in view of the amount involved being large, thought it desirable to elicit opinions of the members of the Committee by circulating to them proceedings of the Joint Sub-Committee meeting together with its own views, so that the whole question might be brought for discussion at this meeting in case of any material difference of opinion. This is separately dealt with on the agenda of the Indian Central Cotton Committee.

11. The Sub-Committee decided to refuse the request of the Publicity Officer for a house rent allowance but he was sanctioned instead an entertainment allowance of Rs. 75 per mensem for the balance of the one year for which he was appointed in the 1st instance, as he was often required to entertain editors and the press reporters in the interest of the publicity work. In view, however, of the reluctance of the Government of India to sanction any allowance in the name of entertainment, the Sub-Committee re-considered the subject and sanctioned him a house rent allowance of Rs. 75 per mensem for the same period as mentioned above.

12. Under Article 51, as amended, of the Articles of Association of the East India Cotton Association, the Indian Central Cotton Committee at its last meeting appointed from the growers' representatives on the Committee two members to the Board of Directors of the East India Cotton Association. The Standing Finance Sub-Committee considered at two of its meetings the question of their travelling allowance and decided that it should be met by the Committee and that the Government of India be requested to amend Rule 8 of the Rules under Section 15 of the Indian Cotton Cess Act. The Government of India have now gazetted the new rule which is as follows :—

"In Rule 8 of the said Rules, after sub-rule (2) the following sub-rule shall be inserted, namely :—

"(3) The Committee may direct that such travelling and halting allowances as would be admissible to Government servants of the first grade serving under the Government of India shall be paid to any member of the Committee in respect of any journey performed for the purpose of attending a meeting of any other association to which he is appointed as a representative of the Committee."

13. The Sub-Committee considered it desirable, in the interest of the Committee to avoid frequent changes in the Secretaryship and decided that, in consideration of the fact that the term of Mr. Ritchie's appointment was due to expire in about three months after his return from leave, the Government of India be requested to replace the services of Mr. Ritchie at the disposal of the Central Provinces Government from the date of expiry of his leave and to appoint Mr. P.H. Rama Reddi in his place for a period of five years. The Sub-Committee also decided that the basic pay of the Secretary should be fixed at Rs. 1,600—50—1,800 roughly equivalent to that of a Director of Agriculture in a province where agriculture is an important subject and that his house rent allowance should be reduced to Rs. 150 per month. Mr. Reddi was, however, recommended house rent allowance at Rs. 250 per month which he has been drawing since his appointment as Deputy Secretary, and an overseas allowance of Rs. 300 per month to which he is entitled in the Government service. The Sub-Committee also fixed the pay of the Deputy Secretary at Rs. 1,100—50—1,300, plus overseas pay, if eligible, and reduced house rent allowance in his case to Rs. 100 per month. Orders have been received from the Government of India reverting the services of Mr. Ritchie to the Central Provinces and appointing Mr. Reddi in his place. The Government, however, have not agreed to the scales of pay recommended by the Sub-Committee but have sanctioned, as a special case, terms for Mr. Reddi which will remain in force for the whole term of his service under the Committee. The terms sanctioned for Mr. Reddi and a Deputy Secretary are as follows :—

Mr. Reddi—

Pay ..	.. As in the time-scale for the Indian Agricultural Service.
Overseas pay	.. Rs. 300 per mensem.
Special pay ..	.. Rs. 400 per mensem.
House rent allowance	.. Rs. 250 per mensem.

Deputy Secretary—

Pay ..	.. As in the time-scale for the Indian Agricultural Service.
Overseas pay	.. At the ordinary rate, if admissible.
Special pay ..	.. Rs. 250 per mensem.
House rent allowance	.. Rs. 100 per mensem.

The Sub-Committee, while agreeing to the scale of pay for a Deputy Secretary, decided that the terms sanctioned for Mr. Reddi should be reconsidered if the new scale of pay for Provincial Directors of Agriculture was higher than the one sanctioned by the Government for Mr. Reddi.

14. The Sub-Committee decided that no Provident Fund money should be invested in any Bank other than the Imperial Bank of India.

15. The Sub-Committee considered an application received from Mr. Ram Saran Koshal, Senior Research Assistant, Technological Laboratory, for an extension of study leave in England for six months. The Sub-Committee decided to extend his study leave by five months as recommended by the Director of the Technological Laboratory, in view of a favourable report from Dr. Fisher of the Rothamsted Experimental Station on the progress of Mr. Koshal.

16. The Sub-Committee had under consideration a letter received from Dr. Meek, Director General of Commercial Intelligence and Statistics, requesting the Committee to participate in the International Spring Fair to be held at Leipzig from the 5th to the 11th March 1933. The Sub-Committee found that it was difficult to collect exhibits within the short time at its disposal and to forward them so as to reach Leipzig before the opening of the exhibition. It therefore decided that no steps need be taken to participate in the exhibition. The Sub-Committee, however, agreed to supply in due course, to the Indian Trade Commissioner at Hamburg, for display in his office, cotton exhibits similar to those supplied by the Committee for the Commercial Samples Room in India House, London, together with replicas of the East India Cotton Association's standards for some selected growths and sanctioned Rs. 500 to meet the cost and forwarding charges of these exhibits directing the Secretary to ask for additional grant, if necessary.

17. The Sub-Committee considered a letter from the Bombay Port Trust asking for modifications, if any, in the new contract to be entered into for transportation and landing of American cotton on the expiry of the present one. The Sub-Committee decided to recommend that, in view of the difficulty experienced during the last season for want of sufficient number of barges, the Contractor should be liable to supply, on receiving ten days' notice, not less than 12 barges, each of 200 bales capacity, in place of ten similar barges under the existing agreement and that the Port Trust should be requested to waive the condition that the Contractor should own two steam cranes. It was also decided that if there was any attempt to raise the rates the Secretary should bring the matter to the notice of this Sub-Committee.

18. The Sub-Committee considered a letter from the Director of Agriculture, Punjab, requesting the Committee to grant to the Research Scholars in the Punjab half the halting allowance, in addition to railway fare for journeys by rail, for the days of starting and concluding a tour. The request of the Director of Agriculture was refused.

19. The Sub-Committee considered the representations of the Botanical and Mycological Assistants on the Baroda Root Rot Scheme for house rent allowance in lieu of the low scale of salary sanctioned for them as compared with other assistants on similar schemes in Gujerat. The Sub-Committee considered it against the interest of the Committee to grant any allowance to its servants when once their scales of pay were fixed after full consideration by the Agricultural Research Sub-Committee, and refused the request.

20. The Sub-Committee recommends that Messrs. S. B. Billimoria & Co. be appointed auditors for the Committee's accounts for the year 1933-34 at a remuneration of Rs. 1,000 per year.

BALANCE SHEET AS AT SEPTEMBER 30TH, 1932.

Balance Sheet as at September 30th, 1932.

The Balance Sheet as at 30th September 1932 is attached ; this is prepared from the audited accounts and shows receipts and expenditure from the beginning of the cotton cess.

RECEIPTS.

	Rs. a. p.	Rs. a. p.
Cotton cess receipts ..	....	82,35,410 14 8
Interest account. Amount received on investments	11,32,419 10 3	
Add—Refund of income tax deducted from interest ..	15,745 3 0	
	11,48,164 13 3	
Less— (1) Interest paid in advance at the time of purchasing Government Paper (since recovered) and Bank's commission for collection of interest ..	42,690 12 1	
(2) Income tax deducted from interest ..	18,306 9 2	
(3) Withdrawal fees charged by the Bank for securities sold	2,356 1 0	

EXPENDITURE.

	Rs. a. p.	Rs. a. p.
I. A. Administration ..		12,60,003 2 10
B. Improvement of Cotton Marketing		73,505 5 1
C. *Seed Distribution and Extension Schemes*—		
1. Hubli ..	17,165 9 0	
2. Gadag ..	18,912 14 1	
3. Gadag Supplementary ..	8,522 1 10	
4. Khandesh ..	54,457 9 6	
5. Surat ..	20,016 13 10	
6. Hyderabad ..	10,245 14 5	
7. Madras ..	3,770 9 0	
8. Sind ..	38,665 1 0	
9. Lyallpur ginnery.	18,125 0 0	
10. Central Provinces	39,283 6 9	
11. Athani ..	1,185 0 0	
		2,30,349 15 5
D. *Printing and Propaganda*—		
(*a*) Publicity and Propaganda ..	3,615 3 0	
(*b*) Printing and Distribution ..	10,646 8 9	
		14,261 11 9

(4) Interest credited to Provident Fund Account ..	4,886 6 2		
(5) Provision for Sinking Fund	2,675 9 0		
(6) Brokerage for sterling securities sold ..	291 9 0		
	71,206 14 5	10,76,957 14 10	
Sinking Fund account ..	....	2,675 9 0	
Miscellaneous receipts ..	....	17,002 9 11	
Profit on securities sold ..	....	53,671 12 7	
Refund from Provident Fund account for contributions disallowed to subscribers resigned ..		3,046 9 5	
Suspense receipts ..		4 3 0	
Carried over ..		93,88,769 9 5	

II. Technological Research.			
(1) *Technological Laboratory.*			
A. Capital Expenditure—			
(*i*) Land and Buildings ..	3,55,797 9 11		
(*ii*) Machinery ..	84,207 6 1		
(*iii*) Freight ..	7,502 2 8		
(*iv*) Apparatus and Equipment ..	41,558 3 7		
(*v*) Machinery Workshop ..	5,789 8 3		
B. Working Expenses ..	11,27,765 5 3		
(2) Provincial ..	33,047 10 9		
		16,55,667 14 6	
III. Research Studentships		2,00,384 4 9	
Agricultural Research Grants—			
IV. *Bombay*—			
(1) Surat Physiological ..	2,38,023 2 3		
(2) A. Surat Boll-worm	1,14,500 9 7		
B. Surat Propaganda	53,976 6 0		
C. Surat Writing-up scheme ..	2,420 0 0		
(3) Dharwar Wilt ..	1,83,065 2 7		
A. Dharwar Writing-up scheme ..	4,519 8 4		
(4) Khandesh Cotton Breeding ..	26,384 6 0		
(5) Co-ordination of Cotton Research ..	1,037 2 0		
Carried over ..	6,23,935 4 9	34,34,172 6 4	

Balance Sheet as at September 30th, 1932—contd.

RECEIPTS.		Rs.	a.	p.
Brought forward ...	..	93,88,769	9	5

EXPENDITURE.		Rs.	a.	p.	Rs.	a.	p.
Brought forward	..	6,23,935	4	9	34,34,172	6	4
(6) Jalgaon Cotton Breeding	..	3,452	2	0			
(7) Broach Cotton Breeding	..	4,396	0	0			
V. *Madras*—							
(a) Herbaceum	..	90,033	12	11			
(b) Pemphores and Physiological	..	23,201	0	4			
(c) Fodder Cholam	..	4,005	7	9			
VI. *Punjab*—							
(1) Botanical	..	3,67,222	6	5			
(2) Entomological	..	1,06,256	6	1			
(3) White Fly	..	13,724	15	6			
VII. Central Provinces	..	2,59,563	13	2			
VIII. United Provinces	..	1,37,133	13	0			
IX. Institute of Plant Industry, Indore.		10,79,674	12	0			
X. Sind	..	1,21,611	4	8			
XI. *Burma*—							
(1) Capital	..	2,906	15	5			
(2) Cotton Improvement		7,798	10	6			
XII. *Hyderabad*—							
(1) Botanical	..	78,267	2	2			
(2) Cotton Survey	..	5,571	4	8			

XIII.	Bikaner ..			24,261	0	0	
XIV.	*Baroda*—						
	(1) Root Rot ..			10,006	13	6	
	(2) Comparative Tests ..			1,597	0	0	
							29,64,620 0 10
			Total Expenditure ..				63,98,792 7 2
XV.	Loans recoverable (but considered doubtful) ..			12,805	0	0	
	Less—Part received from the Cotton Sale Society, Hubli ..			2,449	6	9	
							10,355 9 3
	Suspense account ..						142 6 6
	By *Balance* ..						29,79,479 2 6
			Grand Total ..				93,88,769 9 5
	Grand Total ..	93,88,769	9	5			

Balance Sheet as at September 30th, 1932.

Provident Fund Account.

RECEIPTS.	Rs. a. p.	Rs. a. p.
Subscribers' contributions ..	1,05,443 3 3	
Less—Refunds to subscribers resigned	30,170 2 10	
		75,273 0 5
Committee's contributions ..	93,753 9 0	
Less—Payments to subscribers (resigned) and to the Committee for contributions disallowed to subscribers ..	28,263 14 10	
		65,489 10 2
Suspense deposit of Mr. Dutt's own contributions ..	....	882 9 7
Interest received on investments	3,695 15 3	
Interest received on advances ..	151 14 0	
Add—Refunds of income tax deducted from interest in 1931-32	75 5 0	
	3,923 2 3	

EXPENDITURE AND INVESTMENTS.	Rs. a. p.	Rs. a. p.
By advances to subscribers ..	21,241 11 0	
Less—Recoveries made ..	17,968 1 0	
		3,273 10 0
Interest due on Government Paper up to 31st March 1932 credited to subscribers' account	1,718 8 6	
Add—Interest paid to subscribers resigned during the year ..	14 11 3	
		1,733 3 9
Professional charges for amendment of Provident Fund Rules ..		45 0 0
By *Balance*		1,40,038 6 10

Less—			
(1) Advance interest on 6½ per cent. Bombay Improvement Trust Loan when purchased ..	343 1 7		
(2) Income tax deducted from interest on securities.	125 10 3		
(3) Bank's commission for collection of interest and cost of stamps ..	9 6 0		
	478 1 10		
		3,445 0 5	
Grand Total ..		1,45,090 4 7	

Grand Total .. 1,45,090 4 7

Revised Estimates, 1932-33—*All Heads.*

(As passed by the Indian Central Cotton Committee on the 3rd February 1933).

RECEIPTS.

	Rs.	a.	p.	Rs.	a.	p.
To Opening Balance.	30,59,883	1	8			
To Loans recoverable account ..	12,805	0	0			
				30,72,688	1	8
Cotton cess receipts ..				4,51,000	0	0
Interest account ..				1,52,000	0	0
Miscellaneous receipts.				51,500	0	0*

* Includes Rs. 48,671-12-7 on account of profit realized on 3½ per cent. and 4½ per cent. sterling loan sold during the year.

EXPENDITURE.

Heads.	Sanctioned Budget.			Estimated expenditure.			Savings + deficits —.		
	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.
I. A. Administration ..	1,52,410	0	0	1,26,565	0	0	+25,845	0	0
B. Improvement of Cotton Marketing ..	15,000	0	0	13,000	0	0	+2,000	0	0
C. *Seed Distribution and Extension Schemes*—									
(1) Bombay—									
(*i*) Hubli ..	8,560	0	0	8,010	0	0	+550	0	0
(*ii*) Gadag ..	9,240	0	0	9,240	0	0	....		
(*iii*) Gadag Supplementary ..	4,612	0	0	4,012	0	0	+600	0	0
(*iv*) Haveri ..	2,800	0	0	....			+2,800	0	0†
(*v*) Athani ..	2,980	0	0	2,980	0	0	....		
(*vi*) Bailhongal ..	4,285	0	0	....			+4,285	0	0†
(*vii*) Surat ..	7,800	0	0	7,650	0	0	+150	0	0
(*viii*) Khandesh ..	52,068	0	0	49,468	0	0	+2,600	0	0‡
(2) Madras—									
(*i*) Pay and allowances of Business Manager, Tiruppur ..	3,300	0	0	2,500	0	0	+800	0	0‡
(*ii*) Co. 2 ..	4,790	0	0	4,540	0	0	+250	0	0‡
(*iii*) H. 1 ..	....			....			....		

(3) Sind	..	..	31,000	0	0	27,750	0	0	+3,250	0 0‡
(4) Hyderabad State	..	..	5,000	0	0	4,700	0	0	+300	0 0‡
(5) Central Provinces	..	..	33,015	4	0	13,115	0	0	+19,900	4 0‡
Total	..	..	1,69,450	4	0					
D. *Printing and Propaganda*—										
(*a*) Publicity and Propaganda	..	..	19,341	0	0	21,098	7	0	+1,757	7 0§
(*b*) Printing and Distribution of publications.			11,000	0	0	11,000	0	0	....	
II. *Technological Research*—										
(1) *Technological Laboratory*—										
(*a*) Capital Expenditure,			....			1,100	0	0	+1,100	0 0*A*
(*b*) Working Expenses	..	..	1,57,447	0	0	1,43,982	0	0	+13,465	0 0‡
(2) Provincial	..	..	12,275	0	0	12,740	0	0	−465	0 0*B*
III. Research Studentships	..	..	20,000	0	0	13,000	0	0	+7,000	0 0‖
Carried over	..	..	5,56,923	4	0	4,76,450	7	0	80,472	13 0

Carried over	..	37,27,188 1 8

† Scheme not started.
‡ Reduction of expenditure.
§ Excess required for contingencies and printing.
A. To be met from unutilized Capital balance.
B. Met from the savings for apparatus from the previous year.
‖ Reduced provision due to fewer appointments.

RECEIPTS.

	Rs.	a.	p.
Brought forward ..	37,27,188	1	8

EXPENDITURE.

Heads.	Sanctioned Budget. Rs.	a.	p.	Estimated expenditure. Rs.	a.	p.	Savings + Deficits —. Rs.	a.	p.	
Brought forward . .	5,56,923	4	0	4,76,450	7	0	+80,472	13	0	
Agricultural Research Grants.										
IV. *Bombay*—										
(*a*) Surat Physiological	21,113	0	0	19,713	0	0	+1,400	0	0	*
(*b*) Surat Boll-worm—										
(*i*) Writing-up Scheme ..	2,420	0	0	2,420	0	0	....			
(*ii*) Propaganda ..	31,610	0	0	35,059	0	0	—3,449	0	0	†
	20,000	0	0	20,000	0	0	....			
(*c*) *Dharwar*—										
(*i*) Wilt Scheme ..	2,000	0	0	3,180	0	0	—1,180	0	0	A
(*ii*) Writing-up Scheme ..	9,503	0	0	10,377	0	0	—874	0	0	†
(*d*) (*i*) Broach Cotton Breeding Scheme ..	9,250	0	0	12,135	0	0	—2,885	0	0	†
(*ii*) Jalgaon Cotton Breeding Scheme ..	8,318	0	0	10,561	0	0	—2,243	0	0	†
(*e*) Co-ordination of Cotton Research ..	23,991	0	0	2,000	0	0	+21,991	0	0	B
V. *Madras*—										
(*a*) Herbaceum ..	9,200	0	0	9,000	0	0	+200	0	0	
(*b*) Pempheres and Physiological ..	22,400	0	0	20,400	0	0	+2,000	0	0	
(*c*) Fodder Cholam ..	1,644	0	0	1,894	0	0	—250	0	0	†

Carried over	..	37,27,188	1	8						

VI.	*Punjab*—										
	(*a*) Botanical—Working Expenses	..	58,590	0	0	34,590	0	0	+24,000	0	0*C*
	(*b*) Entomological	..	18,500	0	0	20,220	0	0	−1,720	0	0*D*
	(*c*) White Fly	..	11,140	0	0	10,640	0	0	+500	0	0
	(*d*) Root Rot	..	1,705	0	0	1,705	0	0	....		
	(*e*) Spraying Trials	..	3,250	0	0	3,250	0	0	....		
VII.	Central Provinces	..	46,119	0	0	31,619	0	0	+14,500	0	0*
VIII.	*United Provinces*—										
	(*a*) Capital Expenditure		....			1,547	14	9	−1,547	14	9*E*
	(*b*) Recurring grant for staff	..	6,931	0	0	6,931	0	0	....		
IX.	Institute of Plant Industry, Indore	..	1,00,000	0	0	1,00,000	0	0	....		
X.	Sind	..	27,777	0	0	27,177	0	0	+600	0	0*
XI.	Burma Cotton Improvement	..	6,408	0	0	6,408	0	0	....		
XII.	*Hyderabad*—										
	(*a*) Botanical	..	26,462	0	0	23,462	0	0	+3,000	0	0*
	(*b*) Cotton Survey	..	6,560	0	0	6,560	0	0	....		
	Carried over	..	10,31,814	4	0	8,97,299	5	9	+1,34,514	14	3

*Reduction of expenditure.
†Subject to sanction of Agricultural Research Sub-Committee and Indian Central Cotton Committee.
A. Due to omission of provision for pay for March 1932 due in April 1932.
B. Scheme not started.
C. Cotton Research Botanist not yet appointed and other savings.
D. Includes provision for pay of staff etc. for March 1933 as the scheme terminates on 31st March 1933.
E. Unexpended cash balance utilized with S. F. S. C.'s sanction for demonstration or for further experiments and for dismantling.

RECEIPTS.	Rs. a. p.
Brought forward ..	37,27,188 1 8
Total ..	37,27,188 1 8

EXPENDITURE. Heads.	Sanctioned Budget. Rs. a. p.	Estimated expenditure. Rs. a. p.	Savings + Deficits — Rs. a. p.
Brought forward ..	10,31,814 4 0	8,97,299 5 9	+1,34,514 14 3
XIII. Bikaner	7,640 0 0	5,340 0 0	+2,300 0 0*
XIV. *Baroda*—			
(a) Root Rot ..	8,860 0 0	12,070 0 0	—3,210 0 0†
(b) Comparative tests of 1027 and 1A cottons ..	4,280 0 0	4,280 0 0	....
Total Expenditure ..	10,52,594 4 0	9,18,989 5 9	+1,33,604 14 3
XV. Loans recoverable (but considered doubtful)—			
(1) Hubli Co-operative Cotton Sale Society ..	10,513 0 0		
Less—Instalment received ..	—2,449 6 9		
	8,063 9 3		
(2) Gadag ..	7,292 0 0		
		15,355 9 3	
By Balance ..		27,92,843 2 8	
Total ..		37,27,188 1 8	

*Reduction of expenditure.
†Due to late starting of the scheme, 1st year's provision is made in 1932–33.
N.B.—Most of the savings are due to ten per cent. cut and reduction of provision for the current year and savings of previous year adjusted during the current year.

Revised Estimates, 1932-33.

Provident Fund Account.

RECEIPTS.	Rs. a. p.	Rs. a. p.
To Opening Balance on 1st April 1932		1,30,604 6 8
Subscribers' contributions ..	19,145 4 0	
Committee's contributions ..	19,145 4 0	
	38,290 8 0	
Less—		
1. Refunds to subscribers (resigned) of their own contributions with interest	2,711 7 2	
2. Committee's contributions with interest to subscribers resigned ..	2,384 6 0	
3. Repayable to Indian Central Cotton Committee's contributions with interest disallowed to subscribers resigned ..	267 13 9	
	5,363 10 11	32,926 13 1
Interest recoverable ..		7,150 0 0
Suspense deposit of Mr. Dutt's own contribution with interest		926 5 10
Total		1,71,607 9 7

EXPENDITURE.	Rs. a. p.	Rs. a. p.
Professional charges of Provident Fund Rules and stationery ..		112 8 0
Advances ...	6,542 7 0	
Less—		
Recoverable during the year ..	4,734 3 0	
		1,808 4 0
By Balance ..		1,69,686 13 7
Total		1,71,607 9 7

(As passed by the Indian Central Cotton Committee at its meeting held on the 3rd February 1933.)

RECEIPTS.

	Rs. a. p.	Rs. a. p.
To Opening Balance ..	27,92,843 2 8	
Loans recoverable.	15,355 9 3	
		28,08,198 11 11
Cotton cess receipts.		5,00,000 0 0
Interest account ..		1,42,000 0 0
Miscellaneous receipts		2,500 0 0

EXPENDITURE.

		Rs. a. p.	Rs. a. p.
I. A. Administration			1,51,160 0
B. *Improvement of Cotton Marketing*—			
(i) Cost of Exhibits, Moisture tests, etc.		5,000 0 0	
(ii) Cost of growing cotton in India		73,143 0 0	
			78,143 0 0
C. *Seed Distribution and Extension Schemes*—			
(1) *Bombay Presidency*—			
(i) Hubli		8,560 0 0	
(ii) Gadag		9,240 0 0	
(iii) Gadag Supplementary ..		4,812 0 0	
(iv) Haveri		2,800 0 0	
(v) Athani		6,322 0 0	
(vi) Bailhongal		4,285 0 0	
(vii) Surat		7,860 0 0	
(viii) Khandesh		52,068 0 0	
(2) *Madras Presidency*—			
(i) Pay and allowances of Business Manager, Tiruppur ..		3,600 0 0	
(ii) Co. 2		14,630 0 0	
(iii) H. 1		4,480 0 0	
(3) Sind		31,000 0 0	

(4) Hyderabad State			4,936	0	0	
(5) Central Provinces			9,142	4	0	
(6) Baroda			5,120	0	0	
(7) Punjab—Sale of all farm crop produce			5,000	0	0	
						1,70,655 4 0
D. *Printing and Propaganda—*						
(a) Publicity and Propaganda ..			29,209	0	0	
(b) Printing and Distribution ..			11,000	0	0	
						40,209 0 0
II. *Technological Research—*						
(1) *Technological Laboratory—*						
(b) Working expenses			1,66,055	0	0	
(2) Provincial			14,500	0	0	
						1,80,555 0 0
III. Research Studentships						20,000 0 0
Agricultural Research Grants.						
IV. *Bombay—*						
(a) Surat Physiological Writing-up Scheme			6,500	0	0	
(b) Surat Boll-worm Clean-up Scheme ..			60,683	0	0	
(c) Dharwar Wilt Writing-up Scheme ..			978	0	0	
(d) Broach Cotton Breeding Scheme ..			13,000	0	0	
(e) Jalgaon Cotton Breeding Scheme ..			7,414	0	0	
(f) Co-ordination of Cotton Research ..			23,991	0	0	
Carried over ..			1,12,566	0	0	6,40,722 4 0

Carried over ...	34,52,698 11 11

RECEIPTS.	Rs.	a.	p.
Brought forward ..	34,52,698	11	11

EXPENDITURE.	Rs.	a.	p.	Rs.	a.	p.
Brought forward ..	1,12,566	0	0	6,40,722	4	0
V. *Madras*—						
(*a*) Herbaceum	9,700	0	0			
(*b*) Pompheres and Physiological ..	28,390	0	0			
(*c*) Fodder Cholam	1,780	0	0			
(*d*) Breeding of Nadam cotton ..	2,790	0	0			
VI. *Punjab*—						
(*a*) Botanical	60,200	0	0			
(*b*) Entomological	22,060	0	0			
(*c*) White Fly	11,920	0	0			
(*d*) Root Rot	4,502	0	0			
(*e*) Spraying Trials	8,000	0	0			
VII. Central Provinces	47,619	0	0			
VIII. *United Provinces*—						
(*a*) Recurring grant for staff ..	3,738	0	0			
(*b*) Rohilkhand and Bundelkhand Cotton Survey	5,200	0	0			
IX. Institute of Plant Industry, Indore ..	1,15,000	0	0			
X. Sind	28,143	0	0			
XI. Burma Cotton Improvement ..	8,712	0	0			

XII.	*Hyderabad*—			
	(a) Botanical	26,629 0 0		
	(b) Cotton Survey	7,340 0 0		
	(c) Pink and Spotted Boll-worm ..	7,538 0 0		
XIII.	Bikaner	7,640 0 0		
XIV.	Baroda Root Rot	8,860 0 0		
XV.	Bengal Comilla Cotton	3,085 0 0		
			5,31,412 0 0	
	Total Expenditure ..		11,72,134 4 0	
XVI.	Loans recoverable (but considered doubtful)—			
	Hubli	8,063 9 3		
	Gadag	7,292 0 0		
			15,355 9 3	
	By Balance		22,65,208 14 8	
	Grand Total ..		34,52,698 11 11	

Grand Total .. 34,52,698 11 11

Provident Fund Account.

RECEIPTS.	Rs. a. p.	Rs. a. p.	EXPENDITURE.	Rs. a. p.
To Opening Balance as on 1st April 1933		1,69,686 13 7	By Balance	2,20,945 1 7
Subscribers' contributions ..	20,750 0 0			
Committee's contributions ..	20,750 0 0			
		41,500 0 0		
Recoveries against advances ..		1,808 4 0		
Interest receivable ..		7,950 0 0		
Total ..		2,20,945 1 7	Total ..	2,20,945 1 7

Budget, 1933-34—*Publicity and Propaganda.*

Sub-heads.	Budget for 1932-33 (for ten months).		Budget for 1933-34.	Remarks.
	Original.	Revised.		
	Rs.	Rs. a. p.	Rs.	
1. Salary of Officer ..	8,288	8,700 8 0	11,742	
2. Establishment	1,330	1,147 0 0	2,729	
3. Menials	224	204 4 0	338	
4. Travelling allowance ..	2,500	2,489 9 0	3,500	
5. Allowance to translators ..	1,000	1,428 0 0	2,000	
6. Printing	3,000	5,148 7 9	6,000	
7. Contingencies—				
A. Postage and telegrams ..	350	301 0 0	500	
B. Furniture (including Typewriter—Rs. 325) ..	625	604 0 0	400	
C. Stationery ..	250	126 6 3	300	
D. Exhibits and cost of transport, accommodation, etc.	818	481 13 0	1,000	
E. Miscellaneous charges (including telephone—Rs. 115)	615	467 7 0	700	
Total ..	19,000	21,098 7 0	29,209	

APPENDIX XXVIII.

SUBJECT 41.—*Summary of Half-yearly Report of the Publicity and Propaganda Officer.*

ORGANISATION.

The following is a summary of the report of the first few months since the Publicity Department of the Indian Central Cotton Committee began to function and is an endeavour to present a picture of the programme and work of Publicity and Propaganda.

Press Communiqués.

Emphasis has been laid by members of the Committee on the importance of publishing the activities of the Indian Central Cotton Committee in the Press, especially the vernacular press. This part of the Publicity Department's programme proved to be more difficult when the work was started for the obvious reason that highly scientific and technical reports, without being mutilated, had to be put in a popular form so that the ordinary man in the street or grower in the field could benefit by the results obtained by the various research schemes. Press Communiqués were despatched to almost all the well-circulated news-papers and periodicals in India as well as in foreign countries.

If there were difficulties in the way, I am glad to state that the Press has shown a generous and sympathetic hospitality to the work undertaken by the Indian Central Cotton Committee in the interest of Indian cotton in all its aspects.

Wide publicity was given by the publication of these communiqués (mostly *in toto*) in all the leading Indian papers, in influential foreign periodicals like "The London Times" (London), "The Manchester Guardian", "The Textile Mercury", "The Textile Recorder", "The Textile Manufacturer", "The International Review of Agriculture", etc.; also in other organs in Ceylon and in the Straits Settlements. We are grateful to "The Indian Trade Journal" for sparing as much space for our Communiqués as was necessary. Articles were also sent to the "Associated Press", to Foreign Consulates and Information Bureaux. The Indian Vernacular Press was likewise sedulously nursed by being aided with ready-made translations and a gratifying feature of this instrument of publicity is the great encouragement received.

An exhaustive study of the Research techniqués of the various schemes now in operations was made by the Publicity Officer, and as a result of that study, the following Communiqués were issued :—

1. Improvement of Cotton Cultivation in the Punjab.
2. The Terrible Boll-worm.
3. Indian Central Cotton Committee—25th Meeting.
4. Sindh Physiological Scheme.
5. Training in Cotton Tests.
6. Spinning Tests of Commercial Indian Cotton.
7. Use of Long Staple Cotton by Indian Mills.
8. Protection to the Grower of Long Staple Indian Cotton against the Influx of Foreign Cottons.
9. Khandesh Cotton Breeding Scheme.
10. Campaign against Cotton Wilt Disease in the Central Provinces.
11. Promising Results of Dharwar Wilt Research Scheme.
12. Variation in the Properties of Cotton Fibre.
13. Technological Report on Banilla Cotton, 1930–32.
14. Harmful Effects of Adulterating Good Quality Indian Cottons.
15. "Green-stained" Sind American Cotton.
16. Madras Herbaceum Scheme.
17. Indian Central Cotton Committee—Seed Distribution Schemes.

EXHIBITS.

Pandharpur Show.

Under the auspices of the Village Improvement Committee of Sholapur, an Agricultural Exhibition was held from November 8th to 14th at Pandharpur, a centre of pilgrimage which attracts some 200,000 people, mostly cultivators, from the surrounding districts. The Publicity Department of the Indian Central Cotton Committee organised a stall where exhibits of standard Indian cottons prepared by the Technological Laboratory, Matunga, were displayed and their qualities and performances explained. A 4-coloured poster in English, Marathi, Gujerati and Kanarese, showing the object of the Indian Central Cotton Committee to make Indian cotton supreme in the world's cotton markets, was prominently exhibited. Interesting statistics and diagrams showed the National and International importance of cotton to India. Besides a number of charts showing ginning percentage of various standard cottons, graphs showing the relation between supply and price of cotton (ginned) in the Ahmedabad market and consumption of Indian cottons were likewise displayed. Special illustrated folders in English, Marathi, Gujerati and Kanarese, describing the objects and activities of the Indian Central Cotton Committee were distributed freely and proved an effective means of diffusing knowledge about the Committee which aroused much interest. Questions asked by the more advanced section of cultivators and manufacturers of cotton were answered. Talks and lectures were given.

The Exhibition was opened by His Excellency Sir Frederick Sykes, Governor of Bombay, and local Maratha Chiefs and other people of importance evinced keen interest in the display arranged by the Publicity Department. In this connection, the report in the "Times of India" of 17th November 1932 (which will be found on another page) may be read with interest.

PUBLICATIONS.

Six pamphlets on the following subjects have been prepared and have been sent to various specialists for remarks :—

1. Cultivation of Cotton in India.
2. Cotton Plant on the Farm.
3. Picking and Marketing of Cotton.
4. Qualities of Cotton and Uses of Cotton Seed.
5. Technological Research on Raw Material in relation to Cotton Breeding.
6. Pests and Diseases of Cotton.

The following three illustrated pamphlets and bulletins have been published and are being translated into various vernaculars :—

1. The Indian Central Cotton Committee—Its Objects, Activities and Achievements.
2. The Sind Physiological Scheme.
3. The Khandesh Cotton Breeding Scheme.

Posters.—A start has been made by exhibiting Indian Central Cotton Committee Posters at railway stations. At the two Railway Termini in Bombay, at Churchgate (Bombay), Surat, Baroda, Ahmedabad, Indore, Nagpur, Jalgaon, Akola and Gwalior, in English and the vernaculars. The idea of displaying similar posters at other centres is being progressively pursued.

TOURS.

The Publicity Officer lost no time in supplementing his knowledge of Research Schemes by further observations on the spot of the initial stages of the working and development of these schemes, and by a study of the results achieved. At Pandharpur, several talks embodying the gists of some of the most important results achieved by various research works were given to the *ryots*. As an Associated Press message stated :—

"The Publicity Officer of the Committee will supplement demonstration with lectures on improved breeds, resistance to fungus, etc. With a view to come to close contact with producers the Publicity Officer is offering advice on all questions relating to improvement of Indian cotton."

The special correspondent of the "Bombay Chronicle" wrote :—

"The Publicity Officer has already shown great zeal. His impressive discourses and utterances on the betterment of the cotton crop and, therefore, improvement of the position of the cultivator have succeeded emphasising the need for scientific methods of agriculture and the use of modern implements and machinery. His expositions on organising the business of agriculture on sound lines have endeared him in the hearts of Mahratta cultivators and have, on many occasions, prompted applause from the literate audience."

The "Times of India" reported :—

"Particularly interesting were the exhibits of the Indian Central Cotton Committee, arranged in neat glass cases and showing (1) combed cotton with seed on, prepared by the Halo method to show staple length; (2) card sliver; (3) yarn knots showing strength, counts, twist and production; (4) black winding card to show evenness and neppiness; and (5) yarn bobbins to show cleanliness of yarns, from ten different Standard Indian Cottons. These were calculated to give a fillip to the cotton industry and push on the business alike of the grower and the millowner.

In view of the fact that cotton is a world commodity, and the recent intelligence showing not only greater consumption by Indian mills but increased exports to Japan, China, Great Britain and the Continent of Europe, the Cotton Committee's remarkable poster, 'India's bid for Supremacy in the World's Cotton Markets,' attracted large crowds. It represented Laxmi (Goddess of Wealth) holding a cotton boll in one hand and with the other pouring out money.

A further feature of the Indian Central Cotton Committee's section was a series of talks by the Publicity Officer (Mr. R. D. Mihra) who revealed an intimate knowledge

of the many improvements that have been effected in the growing and breeding of cotton and succeeded in interesting large audiences by his simple explanations of what are usually considered to be complicated matters."

Equally successful was the tour of the Central Provinces and Berar. I quote from the "Bombay Chronicle" :—

"On the following morning he paid a visit to the market, then to the demonstration farm and later to the newly built ginning and pressing factory of Messrs. Volkart Brothers. In the evening he motored to neighbouring villages and addressed gatherings of cultivators. He asked the cultivators to take to modern methods of cultivation and showed how greatly they could improve their lot by organising the marketing of cotton on sound economic lines. He stressed the importance of putting large areas under Verum 262 which is wilt-resistant and at the same time long stapled. In this connection it may be mentioned that the last year's crop under this variety having unfortunately resulted in failure, which really was due to excessive rains, the cultivators fought shy to grow it on a large scale this year. The speeches made by the Publicity Officer showed that he very largely succeeded in restoring confidence of the growers and had thus supplied a real need of the time.

Work explained.

The Publicity Officer explained to the *ryots* the constitution of the Indian Central Cotton Committee, its objects, aims and gave an account of the work the Committee had already done in evolving new varieties which promised bigger yield, better quality and larger profits. Further, he went into the distinctive characters of the new varieties most suited to the climatic and other environmental conditions of these talukas. He referred to the grant sanctioned by the Committee for collection, ginning and marketing of Verum 262 and added that nearly 60 lakhs lbs. of seed had been sold for the benefit of growers. Finally the Publicity Officer brought to the notice of the cultivators the very valuable work of spinning tests done at the Matunga Laboratory of the Indian Central Cotton Committee and ended with an appeal to the cultivators to take greater interest in the improvement of the quality of cotton.

Attractive Poster.

On being asked who was the author of the attractive poster 'India's bid for Supremacy in World's Cotton Market,' the Publicity Officer replied that it was the outcome of a joint enterprise of the Secretary, Indian Central Cotton Committee, and himself. But Sir T. Vijayaraghavacharya supplied what was lacking and put the finishing touches.

The Publicity Officer is spending another week in Berar. He leaves for Akola to-night and afterwards visits Khamgaon, Mehkar and Chikli before proceeding to Northern India on tour."

An Editorial in the Nagpur "Hitavada" stated :—

"The Publicity Officer, Indian Central Cotton Committee, Bombay, Mr. R. D. Mihra, has now been in our province for nearly ten days. During this period he has visited Nagpur, Amraoti, Akola, Khamgaon, Mehkar and Chikli and has carried on an extensive campaign of vigorous propaganda for promoting long stapled Central Provinces cottons which fetch better price and are immune to the widely-spread disease of wilt. From various accounts that we have received about the earnestness and sincerity with which the Publicity Officer has been doing this good work for the benefit of our cultivators, it could be safely said that the realisation of the object he has in view will soon be an accomplished fact. This is signal service to the cotton cultivators. He should repeat such visits to our province."

Another report from this paper's own correspondent read as follows :—

"Mr. R. D. Mihra, the Publicity Officer to the Indian Central Cotton Committee, Bombay, is on tour in Berar. An exceptionally busy programme has been arranged for him. In Amraoti he visited the Demonstration Farm, the Cotton Market and the pooling centre. After acquainting himself with the details of the working of the marketing system for which his Committee is very largely responsible and doing propaganda in favour of Verum cotton in the villages of Walgaon and Naosari, he arrived Akola on the evening of 17th inst. Being an expert agriculturist himself, he has made an exhaustive study of the rotation experiment at the Akola Farm, namely, the effect of rotation on the yield of cotton and the monetary returns and has given several talks to the growers in the cotton market. A three years' course of rotation of cotton, jowar and ground-nut, which is more suited to the local conditions in Berar,

has been widely popularised by him during several meetings at the Akola Cotton Market where several members of the Cotton Market Committee, the Extra Assistant Director of Agriculture, the Superintendent of the Akola Farm and a large number of assistants who are engaged to aid in the marketing of cotton were present. As for the improved variety of Verum, he advocated its wide adoption as it spins 22 to 26 counts and had already established its reputation with the Mills both here and in Bombay. Speaking for the achievements of his Committee he mentioned the Cotton Transport Act and the Ginning and Pressing Factories Act and the C. P. Cotton Market Act, and dwelt at great length on the good results that will follow. Finally he made a particular mention of the valuable work of spinning tests the Technological Laboratory of his Committee at Matunga is doing under the able guidance of Dr. Ahmad and concluded by expressing his sympathy with the plight of the agriculturists. But, he said, self-help was the best help. Mr. Mihra has left the impression of a big guiding spirit. After visiting the local Sawatram Mills the Publicity Officer left for Khamgaon from where he will go to the interior of Berar to continue the good work he is doing."

The results of the tour in the Punjab are summarised in the following reports from the "Tribune" :—

"Mr. R. D. Mihra, Publicity Officer of the Indian Central Cotton Committee, arrived this morning by the Frontier Mail and is staying at the residence of Nawab Nisar Ali Qazelbaksh, Nawab Palace, Empress Road, Lahore. During three days of his stay he will see the Director of Agriculture, Punjab, and will confer with the editors of newspapers impressing upon the latter the necessity of educating cultivators through the columns of their papers on improved methods of cotton cultivation and the results of recent researches, which ensure bigger yield and better returns for their labour. On the 1st December he will proceed to Lyallpur to inspect several schemes of his Committee which aim to solve the problems of the Punjab cottons and from there he will pay visits to Khanewal and other centres of cotton. He returns to Lahore on the 6th December from where he will proceed to Delhi before he returns to Bombay.

"Readiness with which peasants and landowners in the Punjab realise the benefit of introducing up-to-date methods of agriculture was experienced by Mr. R. D. Mihra, Publicity Officer, Indian Central Cotton Committee, who completed to-day a ten days' tour of the cotton growing belt of the Punjab. He visited Lyallpur, Khanewal, Okara and some other places and explained to the agriculturists the advantages of proper tillage and interculture which aroused a great enthusiasm. In the present state of cotton crop in the Province his propaganda in villages to develop interest in cotton crops and value of scientific investigations regarding control measures of diseases and pests of cotton had perceptibly beneficial effect. Mr. Mihra will be reaching Bombay on 9th instant."

The "Hindustan Times" wrote :—

"The propaganda of the Indian Central Cotton Committee for the benefit of *ryots* has been directed firstly, in order to *eliminate preventable losses*, secondly, to *increase the outturn* of cotton.

To take the second from first there is at present a colossal loss in wealth on account of the devastation of the crop through cotton pests. During a recent tour Mr. R. D. Mihra, the Publicity Officer of the Central Cotton Committee, conducted propaganda among the *ryots*, showing them that in the Punjab alone a saving of Rs. 3 crores could be ensured if diseases and pests like the Pink Boll-worm are brought under control. Incidentally the loss suffered in Bombay for the same cause amounts to Rs. 10 crores per annum. The danger has to be fought by scientific methods ascertained as suitable in Research Laboratories. The pest is known in America where the method of neutralizing its havoc was brought to the direct notice of the farmers through State propaganda. The means more suitable in India as well as in America is the heating of the seed to 60 degrees before cultivation. In India if the seed is exposed to the sun for two days in May, the larvae could be killed and the crops rendered immune from this devastation.

Equally important is the problem of increasing the cultivators' dividend by popularising scientific cultivation. The tillage and the inter-culture of cotton are the two accepted processes available for improving the quality of lint and increasing the yield of cotton. Propaganda in this direction is also being vigorously done in India under the publicity programme of the Indian Central Cotton Committee. Suitable literature and personal contact are necessary to make progressive methods known among cultivators all over the country. And the money spent thereon are to be regarded as an economic investment by the State."

TOUR IMPRESSIONS.

In my letters to the Secretary, I have summarised impressions of my tour in the Central Provinces and Punjab as follows :—

Central Provinces.

Study of the Central Provinces Botanical Research Scheme.

The work of the Cotton Section on Nagpur plots consists in the improvement of cottons for various characters such as staple length, high ginning percentage and earliness or lateness in ripening. Resistance against wilt and the suitable crops for rotation with cotton form an important part of the work which is carried on at the Akola Farm.

Of the various strains which have been selected and tested from different varieties of cotton, either by means of hybridization or selection, the new strain of Bani E. B. 31 is regarded as superior to that of Bani 306 by about 5 per cent. in staple length. Its staple is fine and silky and is suitable for spinning 40s warp counts. The yield outturn comes to about 700 lbs. per acre.

No. 438, all selfed, promises a cheerful all-round performance in lint and other field characters as against Verum 262. It combines in itself the qualities of resistance to wilt and earliness of flowering. It is of a uniform 1" staple length and is well spoken of on all sides.

Of the two Verums, early and late, the late is certainly the more popular. This was evolved to meet the need of tracts receiving rains after the month of September. Being 15 days later, it escapes boll-shedding and the opening of undeveloped bolls. It spins 30s counts, possesses good boll-opening habit and is considered superior to Verum 262.

The study of Root System and also of hybridization was extremely fascinating. Roseum was reported as developing a more extensive and pronounced root system than that of either Bani or Verum, the root system of the latter being rather sparse, a fact which possibly accounts for its susceptibility to drought. The early varieties are characterised by their long and thin root system, as when compared with the late varieties.

As regards hybridization work, the genetic study of the plant has revealed that the cross between Bani and Cernuum is highly wilt-resistant. Its long, fine, silky staple, coupled with a high ginning percentage (34 per cent.) has given it a place of honour, when judged from the point of economic usefulness.

Rotation Crops.

Cotton wilt increases when cotton is grown continuously on the same land without change of crop. The rotation must be such as to bring in as much profit as possible and be without any detrimental influence to the land or its fertility. The problem was investigated on the Akola Farm in a series of rotation experiments which were commenced 10 years ago. Several rotations have been tried and it was found that by the inclusion of groundnut (Cotton—Jowar—Groundnut) as a rotation crop in the general farming, an increase of 50 to 100 per cent. in the cotton crop can be assured.

Propaganda to this effect was carried on and also in favour of Verum, which has become somewhat unpopular of late owing to its failure last year—a failure due to excessive rains.

This year's crop is reported to be sound and normal.

Scheme for the Marketing of Verum Cotton and Distribution of its Seed.

This scheme has been planned with great care. Seed is distributed during the hot weather by the Agricultural Assistant, Agricultural Associations and the Seed Farms. After the seed is sown, the Agricultural Assistant visits the fields of cultivators during the rainy season and helps in carrying out roguing operations to bring the cotton to the desired standard of purity. By the end of rains he issues certificates to growers of Verum, specifying the purity which their respective crops have attained. The cotton, after being picked, is brought to Pooling Centres. Here it is graded according to purity and quality, and stored in separate heaps in the ginnery, wherein periodically ginning and pressing operations are performed. Samples are sent out to the Marketing Officer who negotiates sales. The Marketing Officer informs the Pooling Committee of the offers he has received and if the Committee agrees, the sale is concluded. The cotton is then despatched in bales. A cash advance of 70 per cent. of the price prevailing for

Oomra cotton in the local market is given to the cultivator on handing in his cotton and after the bales are sold, and the expenses incurred in preparing the cotton for the market are deducted, as also the interest on the advance (4 per cent.) the balance is handed over to the grower through the Agricultural Assistant or the Pooling Committee, whichever is most convenient.

After the *kapas* has been ginned, cotton seed is returned to the grower, or sold to Agricultural Associations by the Agricultural Assistant on behalf of the grower, if he so desires.

Pooling Committees (one for each taluka) consist of an equal number of representatives of growers and Agricultural Associations with a representative of the Agricultural Department.

An Agricultural Association is a body of limited liability, registered under the Co-operative Societies Act. Its membership consists of cultivators of the taluka who buy shares. Its function is to sell seed, manures and other requisites of the cultivators with a view to developing the Agriculture of the taluka.

Besides Nagpur the following centres were visited :—

(1) Amraoti (Demonstration Farm, Market, Ginnery, Villages in the neighbourhood).
(2) Akola (Farm, Market, Mills, Ginnery and the Pooling Committee).
(3) Khamgaon (Market and Ginnery, met R.B. G. R. Kothare).
(4) Mehkar (Market and Ginnery, Fields, Agricultural Society).
(5) Chikli (Ginnery).

Meetings were addressed, talks given and discussions held at all these places.

Punjab.

At Lahore I called on the Director of Agriculture and Editors of important papers, both English and Vernacular.

Lyallpur.—

Botanical Scheme.

Improved methods of tillage and intercultivation have been continued, in the case of both *Desi* and American Cottons. *Desi* varieties have so far yielded 18 to 24 maunds per acre, while the various American varieties 2-10 maunds per acre.

The effect of early and late waterings is also a subject of investigation and it is hoped results of great economic importance will be achieved in the near future.

New Varieties.

Several new strains of *Desi* and American Cottons are under trial. A heavy bearing new early strain which is reputed to have big bolls and long lint is being tried. The Cotton Botanist entertains the hope that in the very near future this strain will become an important long-staple cotton of the Province.

Efforts are also being made to bring out a long-staple cotton with naked seeds. There is a wide-spread prejudice among *Zemindars* against accepting fuzzy seeds which are considered unsuitable for feeding purposes.

Some measure of success in breeding a variety with the desired character has already been achieved and naked-seeded, long-stapled varieties are being tried on a small scale.

The Work.

Work is being carried out to investigate the causes of the periodic partial failures of the Punjab American Cottons. A detailed study of the reactions of the plants to the various environmental factors is being made. This involves a study of the moisture content of the soil, together with the speed with which water passes up in the stem of the plant; the age of leaves on the different portions of the plant, correlated with the size of the plant, the carbohydrates in the various tissues of the plant, body and the size and weight of the bolls.

Pink Boll Worm Scheme.

As a result of the study of this scheme, it has now been definitely established that climate affects the procreative functions of this insect and is responsible for its peculiar distribution in the Punjab. Temperature and humidity affect the multiplication of this pest and of these two the former was found to be more important. Under certain conditions of temperature the Pink Boll Worm moth can be made to emerge from the seeds

before the cotton season,—i.e., at a time when there is no food for it—and its progeny will die of starvation. This discovery, still in the experimental stage, is of great importance for if we can determine the optimum conditions under which the moth will emerge before the cotton season, we may be able to control the pest.

The Root Rot Scheme.

This disease attacks both *Desi* and American Cottons, mainly in the Canal-irrigated areas. Taking into consideration the total loss to the Province, at a moderate estimate of a little over 2 per cent., the damage caused would amount to 56,250 acres, out of a total area of 2¼ million acres of cotton in the Punjab. If 4 maunds be taken as an average outturn and Rs. 7 as a price per maund, cotton destroyed by the disease would be Rs. 15,75,000. Hence the importance of this scheme which has been well started.

Work on Jassids and the White Fly is being carried on satisfactorily, but no definite results, especially in the case of the former, have yet been achieved, nor can they yet be expected, as the work has been taken in hand only recently.

Visits to Khanewal and Okara were also made.

The crop is late and the *Zemindars* are complaining bitterly against the Irrigation Department for not allowing them sufficient water. In view of the fact that the Punjab has had very little or no rains during the last 5 months, the consequent loss to the crop is appreciable. Some people put it at an "8 anna" crop, others say it is "10 annas," but no more.

Propaganda in favour of American Cottons, especially 4F, was undertaken and control measures were advocated at several meetings, talks and discussions.

The Publicity Officer took advantage of his presence at the Karachi meeting to do some propaganda work in Sind.

Future Programme.

Popular leaflets, summarising each of the series of pamphlets mentioned above, will be published in the vernaculars and freely distributed so as to enable the growers to get the full benefit of the instructions contained therein. It is also proposed to prepare leaflets on specific subjects, such as the ills from which cotton is suffering in particular areas, for *free distribution* in these areas; leaflets showing the progress of Research and Seed Distribution Schemes of improved types, and the progress of the co-operative marketing of cotton; a compendium of India's trade in cotton and cotton goods, etc.,

Items of the Publicity Memorandum, as approved by the full Committee, will be progressively followed up.

The observations of the Publicity Officer during his tour of the Central Provinces and the Punjab are also being incorporated in a series of articles, to be published in due course. These are:—

(1) "Marketing and Seed Distribution of Verum in the Central Provinces," (2) "Botanical and Agricultural Research in the Punjab", (3) "Punjab Root-Rot Scheme," (4) "Boll-worm Scheme" in the Punjab, (5) Some problems of cotton growing and its rotation crops in the Central Provinces and Berar.

Conclusion.

In spite of the general gloom and the prolonged depression in trade, the publicity items of the Committee seemed of great interest to the public, which welcomed the propaganda of the Committee as an instrument for bigger and better yield of cotton. The trade sought a solution of the ills from which the Indian cotton industry was suffering and something more positive has been done in this respect by the provision of a tariff wall against the import of cotton from abroad.

The effort to give all possible publicity to the diversified activities of such an important Committee with the limited means at my disposal was not easy. Publicity work, to be of any value, must be attractive, and attractive publications, posters, exhibits, cost money. But I have made a serious attempt to grapple with this deficiency of funds and hope that the Publicity Work of the Committee will find favour with the members.

APPENDIX XXIX.

SUBJECT 43.—*Proposed introduction of a common unit for the purchase of seed cotton throughout India.*

Secretary's Note.

Mr. B. A. Collins, the Hyderabad State representative on the Committee, has sent the attached note, suggesting the introduction of a common unit for the purchase of seed cotton throughout India for consideration by the Indian Central Cotton Committee.

The question of "standardization of weights for cotton transactions" was considered at the 21st meeting of the Indian Central Cotton Committee in July 1930 and it was decided to leave the question for consideration by the Local Sub-Committee. The subject was accordingly taken up at the 60th meeting of the Local Sub-Committee in October 1930, which decided to defer consideration of the subject. A copy of the note* which was considered by the Local Sub-Committee is attached. Since then, the subject has further advanced as stated below :—

At its 75th meeting held in October 1932 the Local Sub-Committee considered a letter (copy attached) from the Karachi Joint Cotton Committee suggesting the adoption of the Bengal Maund of 82–2/7 lbs. as the basic weight for cotton rates in all the organised cotton markets in India, particularly in the two governing markets, Bombay and Karachi. The Sub-Committee decided to put off the question till the Bill for the standardization of weights and measures then under consideration of the Bombay Legislative Council was published. The Bill has since become law. (The Bombay Weights and Measures Act, 1932.) Under its provisions, in any area to which the Act is applied by Government notification, only the standard weights must be used. The relevant prescribed weights are :—

"The Bombay Tola of 180 grains.

The Bombay Seer of 80 tolas.

The Bombay Maund of 40 seers.

The sub-multiples ½, ¼, ⅛, 1/16 and 1/32 and the multiples, 2, 4 and 8 of the tola, seer and maund.

The pound avoirdupois equal to 7,000 grains and the sub-multiples ⅛, ¼, ½, 1, 2, 4 and 8 ounces, the multiples 1, 2, 4, 7, 14, 28 lbs. (a quarter), 56 lbs., 112 lbs. (1 cwt.) and 2,240 lbs. (1 ton)."

Mr. Collins' note suggesting a common unit of weight for seed cotton throughout India was referred for opinion to the East India Cotton Association and the Karachi Joint Cotton Committee and copies of their replies are attached. Mr. Collins suggested for seed cotton a unit of 700 seers = 1,440 lbs. (on the basis that 35 standard or railway seers are equal to 72 lbs. avoirdupois). The East India Cotton Association are in favour of the unit of weight being the candy of 784 lbs. and recommends this for adoption by the Hyderabad State. The Karachi Joint Cotton Committee urges the adoption of the maund of 40 seers (equivalent to the Bengal or Railway maund of 82–2/7 lbs.) and desires this to be fixed as one of the standard weights to be included in the schedule of the Bombay Act recently passed.

A Common Unit for the purchase of seed cotton throughout India.

One of the greatest inconveniences to the trade at present is the lack of uniformity in the various markets, not only throughout India but in the same province or State and even in the same district, in respect of the unit by which unginned cotton or *kapas* is purchased. Only those acquainted with the units used in the various markets can understand the meaning of market reports and that only after making calculations. Further *kapas* is usually bought in seers and the unit purchased, though often weighed roughly with pound avoirdupois weights has no easy relation with the avoirdupois scale. It would be a great convenience to the trade, if a unit could be introduced throughout India which weighed an even number of pounds and seers. Such a unit would be easily understood by the cultivators, could be weighed by both the standard Indian and the standard British weights and would greatly facilitate trade throughout India. As 35 standard or railway seers are equal to 72 lbs. avoirdupois, the simplest unit would be 700 seers (=1,440 lbs.) but, since in some markets a smaller unit is preferred, the alternative of 350 seers (=720 lbs.) might be given.

* Not printed.

If this proposal is acceptable to the Indian Central Cotton Committee, it is suggested that the opinion of the East India Cotton Association and similar bodies might be taken and, should it be generally approved, it would not be difficult to introduce the new units into all markets by universal consent. Steps are already being taken to introduce them into all markets in Hyderabad State.

Hyderabad,
November 29th, 1932. (Signed) B. ABDY COLLINS.

Copy of letter No. 16/20, dated the 27th July 1932, from the Secretary, Karachi Joint Cotton Committee, Karachi, to the Secretary, Indian Central Cotton Committee, Bombay.

Uniformity of basic weight for cotton rates.

My Joint Committee at its meeting this week considered a suggestion for the introduction of the Bengal maund of 82–2/7 lbs. as the basic weight for cotton rates in all the organised cotton markets in India, particularly in the two governing markets, Bombay and Karachi.

My Joint Committee considers that the above suggestion has much to commend itself, as just as uniformity of cotton standards is essential and desirable, uniformity in the standard weight for cotton rates in all markets will go a long way in simplifying business transactions and facilitating business. My Joint Committee, therefore, feels that this proposition would be welcomed by merchants in big markets and also by agriculturists and small dealers in the mofussil. Uniformity in basic weight in Bombay and Karachi will facilitate straddling business. The agriculturists and the small dealers in the mofussil will be able readily to calculate the value of their cotton as reflected in the prices ruling in the two governing markets of Bombay and Karachi.

If the principle of uniformity in the basic weight is desirable my Joint Committee feels that it is equally desirable to have a standard which would be readily acceptable and understandable by a large majority of cotton traders and cotton producers for whose benefit this measure is sought to be introduced. The Bengal maund of 82–2/7 lbs. is the standard weight for most of the bulk products (agricultural) for railway freight rates, and is in general use as a basis for prices in the major portion of the cotton-producing territory of India. My Joint Committee, therefore, would urge the adoption of the Bengal maund as the standard, as this standard is the most suitable and simple.

I am to request you kindly to invite your Committee to consider the desirability of giving effect to the above suggestion.

Copy of letter No. 1776, dated the 21st December 1932, from the Assistant Secretary, the East India Cotton Association, Ltd., Bombay, to the Secretary, Indian Central Cotton Committee, Bombay.

SUBJECT.—*Common unit for the purchase of seed cotton.*

I am directed to acknowledge the receipt of your letter No. 1915, dated 7th December 1932, and its enclosure on the above subject and to say that the same was considered by the Board of Directors of my Association at their meeting held on the 19th instant. My Board are of the opinion that the unit of weight for seed cotton prevailing in the Berars and Central Provinces, namely a candy of 784 lbs., is very convenient and might be adopted with advantage by His Exalted Highness the Nizam's Government, Hyderabad.

Copy of letter No. 16/23, dated the 27th December 1932, from the Secretary, The Karachi Joint Cotton Committee, Karachi, to the Secretary, Indian Central Cotton Committee, Bombay.

Common unit for the purchase of seed throughout India.

With reference to your letter No. 1916, dated 7th December 1932, I am directed to inform you that my Joint Committee strongly urges adoption of the maund of 40 seers (which is equivalent to the Bengal or Railway standard maund of 82–2/7 lbs.), fixed as one of the standard weights in the " Bill to fix a scale of standard weights and measures for the Presidency of Bombay " recently passed by the Bombay Legislative Council.

(Supplementary Note.)

The following further letter has been received from the Karachi Joint Cotton Committee and is for consideration. The relevant section* of the Bombay Weights and Measures Act, 1932, is attached. It will not be possible for the Committee to make any recommendation in this matter as the initiative should apparently come from district and municipal authorities.

Copy of letter No. 16/24, dated the 14th January 1933, from the Secretary, Karachi Joint Cotton Committee, Karachi, to the Secretary, Indian Central Cotton Committee, Bombay.

Uniformity of basic weight for cotton rates.

I am directed to acknowledge, with thanks, receipt of your letter No. 2334, dated the 3rd January 1933, on the above subject, and to request you kindly to move the Government to apply the Act at once throughout the Presidency.

Copy of letter No. 2334, dated the 3rd January 1933, from the Secretary, Indian Central Cotton Committee, Bombay, to the Secretary, Karachi Joint Cotton Committee, Karachi.

SUBJECT.—*Uniformity of Basic Weight for Cotton Rates.*

I have the honour to invite reference to the correspondence resting with my letter No. 989, dated the 22nd October 1932, and to state that according to the provisions of the Bombay Weights and Measures Act, 1932, recently published by the Bombay Government, the maund to be used in the Bombay Presidency must be a maund of forty seers of 80 tolas each (a tola being equal to 180 grains), wherever the Act is put into force by Government notification. If the Act is applied to all cotton growing districts and the cities of Bombay and Karachi by notification there will be complete uniformity of weight for all cotton transactions in Bombay, Karachi, and the cotton markets in all the districts of the Bombay Presidency.

Under these circumstances, I am to enquire if the Karachi Joint Cotton Committee want any further action to be taken by the Indian Central Cotton Committee.

APPENDIX XXX.

SUBJECT 44.—*Greater use of Indian Cotton in the United Kingdom—Implementing Article 8 of the Ottawa Agreement.*

Secretary's Note.

The attached note on the greater use of Indian cotton in the United Kingdom was considered by the Local Sub-Committee at its 77th meeting held on the 16th January 1933, and it was decided that this subject should be referred to the full Committee.

The views‡ of the East India Cotton Association and Messrs. Ralli Bros. have also been invited, and will be placed before the Committee if received in time.

LOCAL SUB-COMMITTEE.

77TH MEETING—16TH JANUARY 1933.

SUBJECT 4.—*Greater use of Indian Cotton in the United Kingdom—Implementing Article 8 of the Ottawa Agreement.*

Secretary's Note.

Article 8 of the Ottawa Agreement reads as follows :—

"His Majesty's Government in the United Kingdom undertake that they will co-operate in any practicable scheme that may be agreed between the manufacturing,

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* Not printed. ‡ Since received (*vide* page 169).

trading and producing interests in the United Kingdom and India for promoting, whether by research, propaganda or improved marketing, the greater use of Indian cotton in the United Kingdom."

Relevant extracts from the Report of the Indian Delegation to the Imperial Economic Conference, Ottawa, 1932, are attached (Enclosure 1).

At present the demand for Indian cotton in the United Kingdom is small. From the International Federation Statistics it is seen that the highest consumption of Indian cotton in the United Kingdom during the last four seasons was 252,000 bales in 1930-31, and the lowest 183,000 bales in 1931-32, against a total world mill-consumption of 5 to 6 million bales. A very large part of this demand is for Punjab-American cotton and the remainder is divided between Oomras and Bengals with erratic enquiries for staple styles (*vide* Enclosure* 2).

Article 8 of the Ottawa Agreement has aroused considerable interest both in England and in India. The Manchester Guardian Commercial of the 17th December 1932 has a full page article on the English Spinners' views on the quality, use and disadvantages of Indian cotton. As these views are of interest and throw some light on the subject under consideration, they are summarised below :—

(1) Lancashire has built up her textile industry on cotton of $1\frac{1}{8}$" staple, and therefore what she can at present take largely is long staple cotton of over 1 inch. (India does not produce any exportable surplus of this quality.)

(2) The shortest American cottons in use in Lancashire is about $\frac{7}{8}$ to 1 inch. India produces a fair quantity of this class of cotton, but her own mills consume a very large quantity of it leaving only a small surplus for export. Moreover the import duty on raw cotton enables this class of cotton to get a better price in India itself and there is therefore no possibility of this type of Indian cotton entering into competition with American cotton in Lancashire.

(Please see Enclosure† 3. In a good season India will have an exportable surplus of this class of cotton, and in a bad season there might actually be a shortage to meet the requirements of mills in India.)

(3) The coarse spinners in Lancashire will be prepared to take any quantity of Indian cotton provided it is cheap. By cheapness they mean the relative price, as well as the cost at the spindle point. There are also other factors which are against this class of cotton and they are :—

(*a*) the mixing of staples in Indian cotton. This gives irregular yarns,

(*b*) wider variation in colour,

(*c*) bad ginning, dirt, leaf and short fibre, which cause a greater percentage of waste loss. The waste is about 17 in American and 20 in Indian,

(*d*) the harder pressing of Indian bales. To deal with these, improved opening machinery has to be installed,

(*e*) the shorter fibre of Indian cotton. The existing rollers in the mills have to be replaced by those of less in diameter to handle Indian cotton,

(*f*) the risk of breakages. Spindles have to be run more slowly. This reduces out-put and increases cost of yarn,

(*g*) the absence of a steady spot market for Indian cotton in the United Kingdom. Merchants do not carry stocks on account of the fluctuations in parity differences,

(*h*) the consequent necessity of purchasing direct from India. Here again an even running quality cannot be assured of all the year round, and

(*i*) the absence of warehousing facilities in India. Due to this cotton purchased has to be shipped before monsoon to avoid country damage and deterioration in colour. This means financing purchases six months ahead of actual requirements. Many mills are not financially well off to do this.

It is understood that the British Cotton Growing Association has been able to arrange funds to the extent of £10,000 to be used for bulk purchases of Indian cotton which will be kept in store at Manchester for spinners' requirements. This, it is presumed, will partly remove the last three factors stated to be operating against the greater use of Indian cotton.

The Board of Trade has set up a Committee in the United Kingdom with Sir Richard Hayle Jackson as Chairman to discover ways and means of increasing the use of Indian cotton in the United Kingdom. The British Cotton Growing Association has agreed to undertake the secretarial duties of this Committee. The Indian Central Cotton Committee has not so far heard from this Committee.

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* *Vide* page 114. † *Vide* page 113.

Meanwhile the Indian Trade Commissioner, Mr. H. A. F. Lindsay, has arranged to display at the British Cotton Growing Association offices the following type bales supplied to him by the Indian Central Cotton Committee for the Commercial Samples Room at India House :—

(1) 1027 A.L.F.
(2) Jayawant.
(3) Karunganni C.7.
(4) Cambodia Co.2.
(5) Verum 262.
and (6) Bengals (Aligarh Protected area).

It is learnt that representatives of East India Merchants have promised to supply these types or similar grades under their own marks.

It is now for consideration whether the Indian Central Cotton Committee should take any initiative in the matter at this end, and, if so, in what direction. The views of Messrs. Vonesch and Mehta who have already been consulted are attached (Enclosures 4 and 5). Mr. Barnes with whom I discussed this subject is of opinion that, if anything were to be done in this connection, it should be to educate the English spinners on the possibilities of short-stapled Indian cotton rather than of medium-stapled varieties.

ENCLOSURE 1.

Extract from the Report of the Indian Delegation to the Imperial Economic Conference, Ottawa, 1932.

The most important of all India's export commodities is raw cotton, and throughout the negotiations we lost no opportunity of making clear our views that all possible steps ought to be taken to promote its sale in the United Kingdom. In the five years from 1926 to 1930 India exported on an average 628,000 tons of cotton a year, but only 6 per cent. was consigned to the United Kingdom, while the United Kingdom imported 529,000 tons a year, but only 7½ per cent. of this quantity was Indian cotton. The root cause of this disparity is well known. The great bulk of the Indian cotton crop is of short staple, whereas the Lancashire industry has specialised more and more in the finer qualities of goods, for which long staple cotton is required. It is also true that by far the greater portion of India's requirements of cloth for which Indian cotton is suitable is manufactured in India itself. On the other hand, Lancashire makes cotton piecegoods for other markets besides India, the piecegoods imported into India from other countries are largely made from Indian cotton, and every year the quantity of longer staple cotton grown in India suitable for Lancashire use tends to increase. Discussions with the United Kingdom cotton trade representatives at Ottawa showed it to be common ground that the improvement in Indian cotton growing during recent years has made it practicable for English spinners to use substantially larger quantities of Indian cotton than hitherto, and that such a development would be of mutual benefit to both countries. No special technical difficulties militate against an increased use of Indian cotton in Lancashire, and in the last few years the quantities purchased have shown an increase. In these circumstances we raised the question of a duty on foreign cotton in the United Kingdom but the British Delegation made it plain to us that they could not entertain this suggestion, and that the interests of their own industry placed it out of court. We have no reason to complain of this attitude, for the importance of cheap raw materials to a great industry, more particularly when it is mainly dependent on its export markets, is obvious; and indeed, when the question of the permanent retention of a duty on machinery in India, with a preference to the United Kingdom, was raised from the British side, the position we ourselves felt compelled to take up was not dissimilar. In both cases the interests of domestic industries were held to be paramount.

When a duty on foreign cotton imported into the United Kingdom was found to be impossible there still remained the question whether the increased use of Indian cotton by the spinners of the United Kingdom could be stimulated by other methods. It is the best Indian cottons—particularly the newer "growths" of medium stapled cottons—which are most suited to Lancashire requirements, and the United Kingdom cotton trade representatives stated that, although the use of Indian cotton in Lancashire was undoubtedly spreading, the better types of Indian cotton are not widely known in Lancashire, and that in buying Indian cotton the Lancashire spinner is hampered by a lack of market facilities of the kind which he is accustomed to obtain when buying American or Egyptian cotton. Proposals were put forward for an organisation, on which the United Kingdom Cotton Trade Associations and the Indian Central Cotton Committee would be represented, the functions of which would be to bring the Lancashire spinner into closer touch with Indian sources of supply, and to arrange for the interchange of

information and for such technical and commercial assistance as might be needed. We considered cotton research to be adequately provided for already by the Indian Central Cotton Committee and by the British Cotton Industry Research Association, and that while the United Kingdom cotton trade organisations must be the judges of what further propaganda is needed amongst Lancashire spinners in order to popularise Indian cotton, the removal of such marketing difficulties as exist is more important. Considerable advantage should be derived from any organisation which would ensure the presence, at all times, in Lancashire of stocks of Indian cotton large enough to meet spinners' requirements promptly and to afford an adequate selection; stocks of the desired size and variety are unlikely to be carried by purely commercial concerns until the demand for Indian cotton in Lancashire is both larger and more certain than at present. No difficulty would be met with by an organisation of the type proposed in furnishing United Kingdom spinners with full information about the quality and supply of the various Indian cottons. The results of our discussions at Ottawa were to be placed before the various Cotton Trade Associations of the United Kingdom on their return in order that a definite scheme might be prepared. In a report published on their return from Ottawa, the United Kingdom cotton trade representatives emphasise the importance of increasing Lancashire's consumption of Indian cotton, and refer to early arrangements for placing their proposals before the trade in detail. In Article 8 of the Agreement, His Majesty's Government promise their co-operation in any practicable scheme on these lines; it is unnecessary to emphasise the potential value of this provision. A wider market for the improved types of Indian cotton would be of real value to the Indian cotton grower and would do much to encourage the development of cotton growing in India on sound lines with properly balanced production of the different types and staples. With the increased area available for the production of medium staple cotton as a result of the completion of the Lloyd Barrage Canal scheme in Sind this is a matter of great importance.

ENCLOSURE 4.

Copy of letter, dated the 8th December 1932, from J. Voneseh, Esq., C/o Messrs. Volkart Brothers, Bombay, to the Secretary, Indian Central Cotton Committee, Bombay.

Re : *Greater use of Indian Cotton in the United Kingdom—Implementing Article 8 of the Ottawa Agreement.*

I am in receipt of your letter of the 2nd instant (D.O. No. 1815) and note the introductory remarks. In reply I have the following remarks to offer.

The chief consumption of Lancashire still consists of staple cotton and the production of suitable cotton in India being not even sufficient for the requirements of the Indian mills, the price level will only in very exceptional circumstances come into line with the prices in Liverpool for similar cotton from other countries of production. Indian mills who have not got to pay the cost of carrying the cotton from the Indian Ports to Europe, can naturally afford to pay a somewhat higher price, all the more so as the cost of importing foreign growth into India is considerably higher than in the case of imports into Liverpool.

The samples of Indian staple cotton shown in the Commercial Samples Room in India House, London, may be very interesting as an exhibit but I am afraid that they will be of little practical use.

(1) *Surat* 1027 *A.L.F.* is chiefly bought by the Ahmedabad mills who, by reason of their proximity to the growing tract, are in a position to pay even higher prices than the Bombay mills.

(2) *Jayawant* is exclusively bought by Indian mills (all spinning centres) and does not come into consideration for export.

(3) *Karunganni C.* 7 used to be exported in fair quantities, but on account of the increase in the number of spindles in the neighbourhood of the growing tract, is now used nearly exclusively by those mills.

(4) *Coimbatore* 2.—The same remarks as for Karunganni apply to this growth.

(5) *Verum* 262 is still in its infancy and has suffered a severe set-back last year.

(6) *Bengals* are largely bought by the mills in Cawnpore and Delhi and the price for selected cotton is usually out of reach of the exporter.

It seems to me that by showing samples of pure varieties, the spinner at home is left under the illusion that such cotton is grown in merchantable quantities. This is however true only to a limited extent since mixing and adulteration in some form or other takes place with regard to all these descriptions.

There has been a tendency for the last few years to utilise a greater quantity of short stapled Indian varieties but with regard to these qualities no effort on the part of any Government body will bring about an increased consumption unless the parity between these qualities and American cotton is considered by the spinner to be favourable to Indian cotton; for him it is only a matter of calculation.

With regard to the steps to be taken to remove the obstacles to free trading in Lancashire of Indian cotton, I am afraid I have no suggestions to offer. Trade in a raw produce like cotton is naturally governed by world conditions and interference with the general laws of supply and demand will, in my opinion, in the long run only lead to disaster.

The statement that the East Indian Contract of the Liverpool Cotton Association is a failure is quite correct but I am afraid there is no remedy for this. Liverpool will never be as big a consumer of Indian cotton as other spinning centres and it will therefore not be possible for the trader in cotton to lay in a sufficient stock in Liverpool just for the sake of putting the above Contract on a broader basis. By doing so, he would run the risk of considerable losses should the cotton not find a ready market either by sales to the spinners or by tenders since he would be compelled to re-ship the cotton to other consuming centres which would entail a considerable loss as he could only obtain in those markets the price which is paid for direct shipment from India to those ports. A narrowing down of the East Indian Contract to a smaller number of descriptions might make the Contract more popular on the buyers' side but would not help to surmount the obstacles which are lying in the way of the seller and which are outlined above.

ENCLOSURE 5.

Copy of D.O. letter, dated the 12th December 1932, from Chunilal B. Mehta, Esq., 51, Marwari Bazaar, Bombay, to the Secretary, Indian Central Cotton Committee, Bombay.

Greater use of Indian Cotton in the United Kingdom—Implementing Article 8 of the Ottawa Agreement.

I have your D.O. No. 1816, dated 2nd instant, and No. 1998 of 10th instant in the above matter and I have pleasure in sending my views on broader aspects of the subject.

The whole problem is a very complex one. Distinctly there are the following points:—

(1) *Short Staple Cotton.*—There is abundance of it in India. There is no competition to this cotton of any other growth. But there is practically *no* demand for this cotton from Lancashire.

(2) *Long Staple Cotton.*—This is the staple which is mostly used by Lancashire. But the quantity grown in India of this style is not large enough so that substantial volume of it can be exported. It would take many many years before large exportable surplus could be made available. But even assuming there are large quantities available for export, the same would not be taken by Lancashire as long as internal price of Indian cotton is higher in parity with outside growths which are competing with these styles unless special tariff preference is given to Indian cotton in Britain.

(3) *Indian Cotton Cultivator.*—Whose interest could only be secured by better cotton prices.

(4) *The Manufacturer.*—Indian as well as British who would always desire to have comparatively cheaper cotton.

(5) As such the interest of the manufacturer is in direct opposition to the cultivator. Manufacturer would only care to secure cotton comparatively cheaper in price irrespective whether that cheapness is real or artificial.

The sole purpose of the whole Ottawa Agreement specially of Article 8 has been to increase the use of Indian cotton in Britain so that Indian cotton cultivator would benefit by way of better price.

Railway freight rates from long staple cotton growing areas to manufacturing centres should be reduced. For instance freight for cotton from South Indian long staple area to Bombay, Ahmedabad or Cawnpore comes to a bigger amount than freight from these areas to Japan or Continent. As such it is natural that only exporters are prominent buyers in those areas, and hence less competition in buying and lower rates to farmers.

Indian farmers should be tempted to increase the growth of staple cotton by a scheme of bounty so that they may give more attention and efforts to grow long staple cotton in large quantities. This will also help to restrict the internal price ruling higher in parity thereby promoting increased offtake by Lancashire.

Unless some bold and courageous measures are undertaken, I feel that the Article 8 is likely to remain for ever a pious hope without any practical result.

LOCAL SUB-COMMITTEE.

77TH MEETING—16TH JANUARY 1933.

Supplementary Note.

The attached letter from Mr. B. C. Burt is for consideration.

"Copy of letter No. 113/Agriculture, dated the 14th January 1933, from the Agricultural Expert, Imperial Council of Agricultural Research, New Delhi, to the Secretary, Indian Central Cotton Committee, Bombay.

The President has drawn my attention to the fact that the Local Sub-Committee will consider, at its meeting on January 16th, Article 8 of the Ottawa Agreement. I venture to offer the following remarks which may be of some assistance to the Committee in their discussion of this important question.

2. The Indian Central Cotton Committee has always held the view that an established market in Lancashire for the best qualities of Indian cotton would be of definite advantage to Indian cotton growers as any such widening of their market tends to render more certain the premium paid for quality. I do not think there is any difference of opinion either on the general statement that it is equally to the advantage of the Indian cotton mill industry that there should be a larger and more constant exportable surplus of medium-staple cotton as the existence of such an exportable surplus increases the certainty that Indian mills would be able to obtain at all times and even in bad seasons an adequate supply of all types of Indian cotton. The Indian Central Cotton Committee has also, from time to time, laid emphasis on the fact that there should be a proper balance between the production of different types of cotton in India and on the whole it is not a good thing for the whole of the exportable surplus to consist mainly of a few types or of types within a limited market. It is, therefore, desirable that the advantages offered by Article 8 of the Ottawa Agreement should be exploited fully.

3. The Indian Delegation to the Imperial Economic Conference held several meetings with the Lancashire Cotton Delegation and discussed this question in considerable detail. The Lancashire Delegation, in the first place, laid some emphasis on the fact that up to 1930–31 the *percentage* of Indian cotton used by English mills had steadily increased in recent years and they thought that there was now a much more definite desire to use more Indian cotton than existed some years ago. They were inclined to attach very considerable importance to further propaganda amongst English spinners, the circulation of the results of spinning trials and similar information. Their first proposal suggested a Joint Committee which would deal with such matters including further research. The Indian Delegation took the view that a very considerable amount of propaganda had already been conducted at the instance of the Indian Central Cotton Committee and the Indian Trade Commissioner and that so far as research was concerned there was no need for any new organisation; they felt that some other stimulus was necessary if the consumption of Indian cotton in Lancashire was to be materially enhanced. The Lancashire Delegation had also pointed out that it was far more difficult for a spinner to obtain at short notice the types of Indian cotton which he wanted than was the case when purchasing American cotton. The Liverpool market has been built up on American cotton and very large stocks of a wide range of types are carried and the spinner can buy with the greatest ease. It was suggested by the Indian Delegation that any new Association should definitely deal with this difficulty and, in particular, that the uncommercial part of the risk of carrying stocks of cotton larger than existing sales justified should be borne by the proposed new Lancashire organisation.

4. It is not, however, suggested that existing trade channels should be ignored in this matter. On the contrary, the most rapid success would seem to depend on their being fully utilised. The Indian Delegation also received some information from the English correspondents of Bombay exporting firms which may be briefly summarised as follows. The importers of Indian cotton into the United Kingdom are willing to give English spinners every possible facility for buying all types of Indian cotton and are prepared to arrange for guaranteed regular supplies; they are not, however, prepared to carry the risk of large stocks which may or may not find a ready sale. It is suggested

that the Local Sub-Committee might be able to make definite suggestions as to the way in which the Committee now established in Lancashire could assist in the solution of the problem.

5. It is of course understood that no organisation will enable Indian cotton to be sold in the United Kingdom so long as Indian prices are out of parity with world prices. That position, however, we all believe to be temporary and I suggest that plans should be made now for the action to be taken when conditions are more normal."

Supplementary Note.

Copy of letter No. 2239/G/392, dated the 27th January 1933, from the Assistant Secretary, East India Cotton Association, to the Secretary, Indian Central Cotton Committee.

In continuation of my letter No. 2153/G/392, dated 24th January 1933, I am directed to communicate to you as under the views of the Sub-Committee appointed by my Board on the question of implementing Article 8 of the Ottawa Agreement for the information of your Committee.

In order to appreciate what part Indian cotton has been playing in the textile industry of the United Kingdom it is desirable in the first place to give figures of exports of Indian cotton as well as those of consumption of various kinds of cotton in the United Kingdom. In doing so the crop of Indian cotton for the season 1931-32 is not taken into consideration as it was exceptionally a very small crop.

(*Year ending March, 31st.*)

(In thousands of bales of 400 lbs. each.)

	1929-30.	1930-31.
Export to the United Kingdom ..	270	281
To other parts of the Empire ..	7	6
	277	287

While exports of Indian cotton to Japan and China combined were—

1929-30.	1930-31.
2,206	2,292

The consumption of various kinds of cotton in the United Kingdom in thousands of bales was :—

	1929-30.	1930-31.
Americans	1,390	944
Egyptians	307	246
Indian	225	248
Sundries	550	493

Note.—Running American bales are of 500 lbs. (about gross weight).
Running Egyptian bales are of 760 lbs. (about gross weight).
Running Indian bales are of 400 lbs. (about gross weight).

With regard to the sundry figures consumed in the United Kingdom it may be mentioned that if there is any tendency of increased use of any cotton in the United Kingdom, it seems to be of Russian cotton, which would be seen from the fact that in 1930 United Kingdom used 21,315 bales of Russian cotton 400 lbs. each, and in 1931 221,397 bales. Assuming that United Kingdom decided upon using increased quantities of Indian cotton, it can either be by an expansion of British industry or by substitution of Indian cotton for any one or of the other growths consumed by her.

To take the latter alternative first, it is hardly conceivable that the United Kingdom can take Indian instead of Egyptian cotton or "Sundries" for the simple reason that Indian cotton cannot be used for spinning the same counts as Egyptians or, say, East African, Peruvian or Russian cotton ; in fact, the same may be said as to the feasibility

of Indian cotton being used as a substitute for American cotton. It is very well known that the bulk of the Indian cotton crop is of short staple suitable for spinning 20s or lower counts, while as regards the small quantity of Indian cotton suitable for spinning 20s up to 24s or at most 30s, the Indian demand exceeds the Indian supply, so that India herself has to depend upon imports of foreign cotton. This being so, if it is agreed that the United Kingdom should increase her use of Indian cotton, she must take more of what India has to export, viz., short stapled cotton for which the United Kingdom has little use at present.

In order to prove that India has to rely on the import of foreign cotton for the higher counts it would be interesting to know that India imported 470 thousand bales of foreign cotton during 1930-31, all long stapled cotton. This shows that the production of long stapled cotton has first to fill a gap of something like 500 thousand bales for India's own use, before it can think of exporting stapled cotton for the use of Lancashire. It might be pointed out that this also is an under-statement as it presupposes that the spinning of finer counts in India will not expand by the time India produces 500 thousand bales of long stapled cotton, which is already happening every year. The figures cited above would show that the following observations in the report of the Indian Delegation at Ottawa have little justification :—

> "It is common ground between representatives of the United Kingdom cotton trade, and Indian cotton growers that the improvement which has taken place in Indian cotton grown during recent years has made it practicable for Lancashire to use substantially larger quantities of Indian cotton than hitherto, and that such developments would be of mutual benefit to both countries."

Taking the other alternative, viz., that of the British industry expanding exclusively or largely on the increased use of Indian cotton, the same would appear to be a remote contingency at best. It has been found that Lancashire cannot compete with other countries in the spinning of coarser counts as the spread between the raw material and finished products in these is necessarily smaller. It must be admitted that the direction in which the United Kingdom industry can expand is in the spinning of finer counts of yarn and the production of better varieties of cloth where her highly paid and better trained labour can have full scope.

It is felt that perhaps the protagonists of the Ottawa Trade Agreement realising the eventuality referred to above have agreed to Article 8 of the Ottawa Agreement as under :—

> "His Majesty's Government in the United Kingdom undertake that they will co-operate in any practical scheme that may be agreed between the manufacturing, trading and producing interests in the United Kingdom and India for promoting, whether by research, propaganda or improved marketing, the greater use of Indian cotton in the United Kingdom."

It is submitted that it is difficult to see how a practical scheme can be devised in this connection. The Indian Central Cotton Committee is spending the Indian-grower's money in both Agricultural research and Technological research. Its efforts have not still enabled sufficient long stapled Indian cotton being produced to meet Indian requirements, and they are hardly likely to do so within the next few years. It is thus a problem to be solved as to how the United Kingdom can take more Indian cotton by "Research". It is not known how far propaganda can alter hard economic facts or trade tendencies. Regarding improved marketing, it would be realised that Indian cotton is the best marketed in the world. It is the best packed bale and has the smallest number of cases of false packing and has the least moisture content in comparison with Egyptian or American cotton.

It would thus be seen that the question, viz., in what way the United Kingdom can co-operate with India which would enable her to take more Indian cotton, involves consideration of issues which are full of practical difficulties and in view of the facts and figures cited above, the Sub-Committee are inclined to believe that the sponsors of the Ottawa Agreement have some scheme in their mind which ought to be submitted and analysed before granting that India so far as cotton export is concerned has gained anything from this Pact.

Copy of letter, dated the 26th January 1933, from Messrs. Ralli Brothers, Limited, Bombay, to the Secretary, Indian Central Cotton Committee, Bombay.

Greater use of Indian cotton in the United Kingdom—Implementing Article 8 of the Ottawa Agreement.

We thank you for your letter No. 2581, dated 17th January, and as desired we give you below our views on the above subject.

Cotton research is adequately provided for by the efforts of the Central Cotton Committee which has already yielded satisfactory results. In view, however, of the Indian mills' requirements, stapled cotton finds a good market in India itself and it is doubtful therefore whether the bulk can ever be offered to outside markets on a competitive basis compared to other growths. India, in fact, in order to satisfy her requirements has to import foreign growths notwithstanding the import duty. So long as Lancashire cannot rely on regular supplies and at a reasonable parity at that, we hardly think that stapled Indian varieties can replace other suitable growths there except occasionally when prices happen to be attractive enough to be used as substitutes.

As regards medium and short stapled varieties such as Broach, Oomras and Bengals, the position is quite different for there is always a considerable surplus available for export after fully satisfying Indian mills' requirements. There is therefore a wide field for Lancashire in the case of these varieties provided the spinning industry can organize itself on such lines as to be able to produce suitable counts on a large scale and at competitive costs, so as to place itself in a position to cater successfully for the markets depending now mainly on the Far East and the Continent.

As regards the suggestion to set up an organization for the purpose of "insuring the presence, at all times, in Lancashire of stocks of Indian cotton large enough to meet spinners' requirements promptly and to afford an adequate selection", we doubt whether any practical scheme could be evolved, at this stage, which would be an improvement on what is done at present by Commercial Concerns.

The main reason for this is afforded in the following remark appearing in the report appended to your letter under reply :—

> "Stocks of the desired size and variety are unlikely to be carried by purely Commercial Concerns until the demand for Indian cotton in Lancashire is both larger and more certain than at present."

It can be safely assumed that the trade will automatically see to it that sufficient and suitable stocks are created in Lancashire the moment conditions warrant expectations for increased consumption.

APPENDIX XXXI.

SUBJECT 45.—*Central Provinces Seed Distribution and Extension Scheme—Utilization of savings in the current year for the grant of bonus to growers of Verum cotton.*

Secretary's Note.

The attached letter and enclosure from the Director of Agriculture, Central Provinces, are for consideration.

At its meeting held in August 1932, the Indian Central Cotton Committee sanctioned the extension of the Central Provinces Seed Distribution and Extension Scheme for a further period of one year from the 1st August 1932 to the 31st July 1933 at a total estimated cost of Rs. 26,316-8-0, the provision for the current year being Rs. 17,174-4-0. In forwarding the proposals the Director stated that no provision was made for the grant of bonus to cultivators as was sanctioned by the Committee in the previous year as the subject of prize schemes for clean picking and improved varieties of cotton was being separately considered by the Committee at that meeting. This subject was considered by the full Committee at its meeting held in August 1932, but by a majority it decided against financing such schemes. The proposal for the grant of bonus to the Verum cotton growers now submitted by the Director of Agriculture, Central Provinces, is thus contrary to the decision of the Committee.

The circumstances under which the grant of bonus was sanctioned in the previous year are as follows :—

In the Central Provinces Seed Distribution and Extension Scheme for 1931-32 which was considered by the Committee in July 1931 provision was made in the budget for gold medals and cash prizes amounting to Rs. 3,500, the object being to stimulate interest in pure seed cotton. In view however of adverse weather conditions which had adversely affected the crops, the Deputy Director of Economics and Marketing who was in charge of the Verum cotton scheme, considered it advisable to convert the prize scheme into a bonus scheme under which all growers who put Purity I *kapas* into the pool would receive extra financial benefit for doing so, the maximum bonus to be paid being limited to Rs. 5 per khandi of *kapas*. In view of the urgency of the matter at that time only the local members of the Committee were consulted and as the majority agreed to the proposal, sanction was accordingly conveyed.

As stated above, no provision exists in the scheme sanctioned in August last for the grant of bonus to growers, but the Director of Agriculture in submitting the proposals states that he anticipates a saving of about Rs. 4,059 in the current year's budget from which the expenditure of Rs. 4,000, if sanctioned, can be met.

Copy of letter No. 336, dated the 20th January 1933, from the Director of Agriculture, Central Provinces, to the Secretary, Indian Central Cotton Committee.

Bonus to Verum Cotton Growers.

I have the honour to forward herewith a copy of the resolution passed at the meeting of representatives of Agricultural Association and Departmental Officers held at Akola on the 8th November 1932 regarding the grant of bonus to Verum growers during the current season and to say that as intimated in my letter No. 6, dated the 3rd January 1933, a balance of Rs. 4,059 is likely to be available from the sum of Rs. 17,174-4-0 approved of by the Committee for expenditure on the scheme during the current year. I accordingly request that if your Committee has no objection a sum of Rs. 4,000 out of this saving may be utilised for this purpose.

Copy of resolution passed at the meeting of representatives of Agricultural Associations and Departmental Officers held at Akola on the 8th November 1932, regarding the grant of bonus to Verum growers during the current season.

"This meeting of representatives of Taluka Agricultural Associations offers its grateful thanks to the Indian Central Cotton Committee for having granted an amount of Rs. 3,500 for distribution as bonus to Verum growers who maintained complete purity in Verum cotton last season and earnestly requests that a sum of Rs. 5,000 may be provided for the same purpose this year. The meeting is strongly of opinion that the bonus system is the most effective way of encouraging the growing of pure varieties of improved cotton."

APPENDIX XXXII.

SUBJECT 46.—*Provincial Cotton Committees—Proceedings of the Sind Cotton Committee.*

Secretary's Note.

The attached Minutes of the Sind Cotton Committee are for information.

Attention is specially invited to subjects 2 (*b*), 4, 6, 10 and 15 of these Minutes.

SIND COTTON COMMITTEE.

SECOND MEETING.

10TH JANUARY 1933.

Minutes.

Present :

W. J. Jenkins, Esq., M.A., B.Sc., I.A.S., Chief Agricultural Officer in Sind (*Chairman*).
A. J. Panas, Esq.
Seth Issardas Varandmal.
Rai Bahadur Tharumal Bilaram.
Mukhi Gobindram Pritamdas.
Bakshi Darshan Singh.
Babu Ghulam Mahomed.
Khan Bahadur Azim Khan, Deputy Registrar, Co-operative Societies, Sind.

By invitation.

A. P. Darlow, Esq.
Capt. Vanrenen.
Mr. K. I. Thadani, Botanist in Sind.
Mr. K. H. Advani, Cotton Supervisor, Left Bank.
Mr. H. A. Idnani, Cotton Supervisor, Right Bank.

SUBJECT 1.—*Confirmation of Minutes of 1st Meeting held on 18th February 1932.*

The Minutes of the 1st meeting were confirmed.

SUBJECT 2.—*Note on action taken on Minutes of 1st meeting of Sind Cotton Committee.*

The Chief Agricultural Officer in Sind's Note was considered and recorded.

(*a*) It was agreed that the Commissioner in Sind should be requested to allow the Sind Cotton Committee to submit its recommendation to him regarding the nomination of a representative of the Sind cotton-growers on the Indian Central Cotton Committee, when such appointment has to be filled in the future.

(*b*) It was decided that the Indian Central Cotton Committee should be requested to send copies of the pamphlet, issued by them, on the results of tests on "green stain" in Sind-American cotton, conducted at the Technological Laboratory, Matunga, to the cotton exchanges at Liverpool and Manchester for the information of the members of these exchanges.

(*c*) It was agreed that steps should be taken to give more publicity among the zamindars in the cotton growing tracts to the concession regarding permission to grow crops for green manure purposes free of assessment, referenee Government Press Note, dated 25th July 1932.

SUBJECT 3.—*Sind Cotton Committee—Resolution of Indian Central Cotton Committee, Bombay.*

The resolution passed by the Indian Central Cotton Committee, Bombay, was noted.

SUBJECT 4.—*Impurities in Sind and Bengals cotton—Letter from Secretary, Indian Central Cotton Committee, Bombay.*

The letter of the Secretary, Indian Central Cotton Committee, Bombay, was considered. It was agreed that, in general, there was no legitimate cause for complaint regarding cotton ginning in Sind which was, as a rule, of a high standard. The Committee felt that the remedy for bad ginning lay in the hands of buyers who should refuse to purchase cotton from centres where persistent bad ginning takes place. It was decided that copies of Dr. Nazir Ahmed's note on "Proper Setting of Roller Gins" should be sent to all ginning factories in Sind for information.

SUBJECT 5.—*Defective ginning of Sind-American cotton.*

The Chief Agricultural Officer in Sind's note was considered.

It was agreed that the encouragement of clean picking among the zamindars would be advantageous and that further propaganda work in this direction should be undertaken by the Agricultural Department. The opinion was expressed that saw ginning was not suitable for Sind cottons. The Committees agreed that the action decided on under Subject 4 would be sufficient.

SUBJECT 6.—*Adoption of Universal Standards for Indian cottons—Reference from Indian Central Cotton Committee, Bombay.*

The letter from the Secretary, Indian Central Cotton Committee, and a note from Mr. Girdharlal B. Kotak, were considered. The Committee passed the under-noted resolution and instructed the Chairman to bring it to the notice of the Indian Central Cotton Committee, Bombay :—

"The Sind Cotton Committee, having been favoured with the opinion of the Karachi Joint Cotton Committee on the adoption of universal standards for Indian cottons, as communicated to the Secretary, Indian Central Cotton Committee, in the letter No. 49/1, dated 26th October 1932, from the Secretary of the Joint Cotton Committee, Karachi, desires to support the opinions expressed by the Joint Cotton Committee as being in the best interests of the cotton growers of Sind and most favourable to the profitable extension of superior quality cottons in the Barrage area".

SUBJECT 7.—*Regulation of the construction of ginning and pressing factories in the Lloyd Barrage Zone of Sind.*

The Chief Agricultural Officer in Sind's note was considered.

It was agreed that the existing ginning and pressing factories in Sind would shortly be quite inadequate to deal with the cotton crop produced in the Barrage areas and that further erection of factories was essential. The Committee agreed that some control should be exercised over the erection of new factories both with regard to number and

situation and a Sub-Committee, as under, was appointed to consider the question in consultation with the Revenue Officer, Lloyd Barrage, and submit a report at the next meeting of the Sind Cotton Committee :—

W. J. Jenkins, Esq., Chief Agricultural Officer in Sind,
Seth Issardas Varandmal,
A. P. Darlow, Esq.,
Capt. Vanrenen,
Rai Bahadur Tharumal Bilaram,
Khan Bahadur Azim Khan.

SUBJECT 8.—*Note by Rai Bahadur Tharumal Bilaram re : "Necessary improvements in cotton marketing in Sind".*

Rai Bahadur Tharumal Bilaram's note was considered.

Considerable discussion took place on the question of the establishment of regulated cotton markets in the Barrage areas and it was finally agreed to defer further consideration of this matter until the report of the Sub-Committee appointed under Minute on Subject 7 above was received and considered by the Committee.

SUBJECT 9.—*Note on harmful effects of adulterating good quality cottons—Leaflet issued by the Indian Central Cotton Committee's Technological Laboratory.*

The leaflet was considered and recorded.

SUBJECT 10.—*Note by Mr. Girdharlal B. Kotak on "Short stapled cotton".*

Mr. Kotak's note was considered.

The Committee agreed that Sind *deshi* cotton could be produced up to an annual outturn of two lacs bales without affecting prices on account of excessive supply of this type. The under-noted resolution was passed and the Chairman instructed to bring it to the notice of the Indian Central Cotton Committee, Bombay :—

"The Sind Cotton Committee fully endorses the importance of adequate attention being paid to the development and improvement of the cultivation of *short-stapled* cottons in India as emphasised in Mr. Girdharlal B. Kotak's note on 'Short Staple Cottons'. The Committee considers that the Indian Central Cotton Committee should take special measures to encourage and assist scientific work on the improvement of short stapled *deshi* cottons in tracts where such varieties are at present grown and should request Agricultural Departments to devote special attention to the development and extension of the cultivation of improved *short stapled* varieties of cotton in selected areas."

SUBJECT 11.—*Note by Mr. Girdharlal B. Kotak on formation of a Cotton Association in Karachi.*

Mr. Kotak's note was considered and it was agreed that the formation of a Cotton Association in Karachi would be of much benefit and should be given effect to whenever conditions were favourable for such a development.

SUBJECT 12.—*Proposal by Mr. Bakshi Darshan Singh re : "seed stores".*

Mr. Bakshi Darshan Singh's note was considered.

It was decided that the establishment of seed stores could be carried out most suitably by co-operative organisation and the Chief Agricultural Officer in Sind was requested to consider the preparation of a scheme for the establishment of such stores in the cotton growing tracts in consultation with the Deputy Registrar, Co-operative Societies.

SUBJECT 13.—*Proposals by Babu Ghulam Mahomed Khan.*

(*a*) Root-rot and red leaf diseases.

(*b*) Green manuring of cotton crop with green manure crops.

Babu Ghulam Mahomed Khan's proposals and the Chief Agricultural Officer in Sind's note were considered and recorded. The Chief Agricultural Officer stated that investigations into the causative factors of root-rot and red-leaf diseases and the possibility of the adoption of economic measures to reduce loss caused by root-rot and "red-leaf" were being carried out at Sakrand. With regard to proposal (*b*) action had already been taken.

SUBJECT 14.—*Resolution by Mukhi Gobindram Pritamdas regarding expediting construction work on Khadro-Nawabshah railway extension.*

Mukhi Gobindram Pritamdas' resolution was considered and it was decided that, in the interests of the cotton growers of the tracts concerned, the Chief Agricultural Officer in Sind should bring to the notice of Government the need for the completion of the extension at an early date or, alternatively, the construction of a *pucca* road between Khadro and Nawabshah.

SUBJECT 15.—*Note by Mr. Girdharlal B. Kotak on representation of Karachi Indian Merchants' Association on Indian Central Cotton Committee.*

Mr. Kotak's note was considered.

The Committee agreed to support Mr. Kotak's proposal that the Karachi Indian Merchants' Association, Karachi, should be granted a statutory representative on the Indian Central Cotton Committee and instructed the Chairman to inform the Indian Central Cotton Committee accordingly.

SUBJECT 16.—*Draft rules for working of Sind Cotton Committee.*

The Chief Agricultural Officer in Sind's note was considered. It was decided—

(*a*) that six members of the Committee should constitute a quorum,

(*b*) that two meetings of the Committee should be held annually in June and November approximately.

SUBJECT 17.—*Any other business.*

It was decided that the next cold weather meeting of the Committee should be held at Sakrand.

(Signed) W. J. JENKINS,
Chief Agricultural Officer in Sind,
and Chairman,
Sind Cotton Committee.

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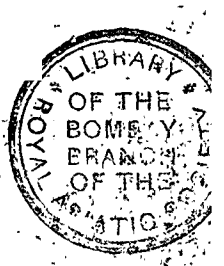
30 JAN. 1934



Summary Proceedings

of the

Twenty-Seventh Meeting of the Indian Central Cotton Committee, Bombay,

held on the

29th and 30th August 1933.

BOMBAY BRANCH
OF THE
ROYAL ASIATIC SOCIETY.
TOWN HALL, BOMBAY.

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INDIAN CENTRAL COTTON COMMITTEE.

27TH MEETING—AUGUST 29TH AND 30TH, 1933.

(Held at Vulcan House, Ballard Estate, Fort, Bombay).

SUMMARY PROCEEDINGS.

ROYAL ASIATIC SOCIETY LIBRARY OF THE BOMBAY BRANCH OF THE

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Dewan Bahadur Sir T. Vijayaraghavacharya presided and the following members were present :—

B. C. Burt, Esq., C.I.E., M.B.E., I.A.S., Agricultural Expert, Imperial Council of Agricultural Research (*ex-officio*).

S. V. Ramamurty, Esq., I.C.S., Director of Agriculture, Representative of the Agricultural Department, Madras.

Dr. W. Burns, I.A.S., Director of Agriculture, Representative of the Agricultural Department, Bombay Presidency.

H. R. Stewart, Esq., I.A.S., Director of Agriculture, Representative of the Agricultural Department, Punjab.

F. J. Plymen, Esq., C.I.E., I.A.S., Director of Agriculture, Representative of the Agricultural Department, Central Provinces.

S. D. Saklatvala, Esq., Representative of the Bombay Millowners' Association.

H. B. Moore, Esq., Representative of the Bombay Chamber of Commerce.

Chunilal B. Mehta, Esq., Representative of the Indian Merchants' Chamber.

J. O. G. Barnes, Esq., Representative of the Karachi Chamber of Commerce.

Seth Naranlal Jiwanlal, Representative of the Ahmedabad Millowners' Association.

J. Vonesch, Esq., Representative of the Tuticorin Chamber of Commerce.

E. J. W. Plummer, Esq., Representative of the Upper India Chamber of Commerce.

Y. G. Deshpande, Esq., Commercial representative, Central Provinces.

Rao Bahadur G. R. Kothare, Commercial representative, Central Provinces.

Khan Bahadur Sardar Habibullah, M.L.C., Commercial representative, Punjab.

Rao Bahadur M. G. Deshpande, C. B. E., Co-operative Banking representative .

The Hon'ble Mr. V. C. Vellingiri Gounder, Representative of cotton growers, Madras.

M. R. Ry. K. Sarabha Reddi Garu, M.L.C., Representative of cotton growers, Madras.

Sardar Rao Bahadur Bhimbhai Ranchodji Naik, M.L.C., Representative of cotton growers, Bombay Presidency.

Rao Bahadur C. S. Shirahatti, Representative of cotton growers, Bombay Presidency.

Sardar Sampuran Singh, M.L.C., Representative of cotton growers, Punjab.

Mian Nurullah, M.L.C., Representative of cotton growers, Punjab.

N. M. Deshmukh, Esq., Representative of cotton growers, Central Provinces and Berar.

J. B. Deshmukh, Esq., Representative of cotton growers, Central Provinces and Berar.

C. V. Sane, Esq., Director of Agriculture, Representative of the Baroda State.

F. K. Jackson, Esq., Director, Institute of Plant Industry, Indore, Representative of Rajputana and Central India States.

D. N. Mahta, Esq., Economic Botanist for Cotton, Central Provinces.

M. R. Ry. V. Ramanatha Ayyar, Avl., Cotton Specialist, Coimbatore.

Mashir Bahadur S. V. Kanungo, Customs Commissioner, Representative of the Indore State.

W. J. Jenkins, Esq., I.A.S., Chief Agricultural Officer in Sind, Karachi.

Rai Saheb Thakur Ram Prasad Singh, Economic Botanist to Government (Cotton), United Provinces, Cawnpore.

Khan Saheb Farrukhbeg Sadikalibeg Mirza, Representative of the Cotton growers of Sind.

The Secretary (P. H. Rama Reddi, Esq., I.A.S.).

The Director, Technological Laboratory (Dr. Nazir Ahmad).

The Publicity Officer (R. D. Mihra, Esq.).

By invitation.

J. V. Joshi, Esq., Deputy Director of Statistics, Department of Commercial Intelligence and Statistics, Calcutta.

R. P. Jones, Esq., British Cotton Growing Association (Punjab) Ltd., Khanewal.

J. B. Hutchinson, Esq., Geneticist and Botanist, Institute of Plant Industry, Indore.

Rai Saheb Kalidas Sawhney, Cotton Research Botanist, Parbhani.

Professor R. H. Dastur, Royal Institute of Science, Bombay.

Nizam-ud-din Hyder, Esq., Director of Agriculture, H. E. H. the Nizam's Government, Hyderabad (Deccan).

S. S. Salimath, Esq., Deputy Director of Agriculture, Southern Division, Dharwar.

B. S. Patel, Esq., Deputy Director of Agriculture, Gujerat, Surat.

Presidential Address.

Gentlemen,

As arranged the Sectional Sub-Committees of the Agricultural Research Sub-Committee have very carefully scrutinized the proposals for all the research schemes and have made recommendations thereon to the full body of the Agricultural Research Sub-Committee whose report was before you. The report of the Technological Research Sub-Committee was also before you. These reports had greatly simplified your work and were now for consideration.

Relating to the question of the licensing of Gins and Presses several members had dwelt on the necessity of introducing a system of licenses with a view to putting a stop to the malpractices which are so prevalent in the cotton trade. The Local Sub-Committee having obtained the views of the various trade associations had also now referred this subject for your particular attention.

An act which provides for regular markets for commercial crops including cotton known as the Madras Commercial Crops Markets Act, 1933, will also be found among the papers before you. In respect of the Cotton Forecast Improvement Sub-Committee this Sub-Committee will not be able to examine and report upon the accuracy of this season's forecast estimates as the present season is not yet completed, but it will consider a report upon the schemes for investigating the nature and extent of extra factory consumption of cotton which will be placed before you to-morrow. It was gratifying to know that considerable progress had been made in the matter of obtaining an annual census of stocks of cotton at the ports and inland centres, information regarding the stocks at mills will be collected directly by the Committee. As to the publication of Cotton Forecasts your strong support was bound to create an impression on the Government of India. Following the passing of a resolution in favour of the organization of a Cotton Market at Karachi it was gratifying to see that this was now an accomplished fact.

In view of the absence out of India of Sir Purshotmadas Thakurdas, the question of preparing Universal Standards of Indian cotton by the East India Cotton Association, Bombay and the Karachi Cotton Association had of necessity to be postponed.

While in England both Sir Purshotamdas Thakurdas and myself have worked hard to impress the people concerned in general and the Indian Cotton Enquiry Committee in particular with the importance of making greater use of Indian cotton in the United Kingdom. This you will see borne out by the observations of the Indian Cotton Enquiry Committee now before you.

Under the amended rules 5 and 6 of the Institute of Plant Industry, Indore, Mr. Chunilal B. Mehta and Seth Kasturbhai Lalbhai have been added to the list of three representatives of our Committee on the Board of Governors at Indore.

On the matter of cotton growers' representatives on the Board of the East India Cotton Association it would be advisable to fix a certain amount for travelling allowances, because of the increased representations on the one side and items of interests to growers being restricted to particular meetings on the other.

Owing to the better terms of the new contract for lighterage and the consequent reduction in transport charges, I recommend a permanent reduction in fumigation charges to importers. As usual the Standing Finance Sub-Committee has recommended also a rebate on fumigation fees paid during 1932-33.

In addition to the above the report of the Finance Sub-Committee, the Proceedings of the Punjab Provincial Cotton Committee and the Sind Cotton Committee as also the half-yearly report of the Publicity and Propaganda Officer are included amongst the papers before you which show the progress made during the period under review.

SUBJECT 2.—*Confirmation of Minutes.*

The Minutes of the previous meeting were taken as read and recorded.

SUBJECT 3.—*Comments of the Government of India on the Annual Report of the Committee.*

The letter of the Government of India commenting on the Annual Report of the Committee for the year ending 31st August 1932 acknowledging the valuable work done by the Indian Central Cotton Committee was recorded.

SUBJECT 4.—*Changes in the personnel of the Committee and Sub-Committees.*

The following changes in the personnel of the Committee and Sub-Committees due to either the annual retirement of one-third of the members or to resignations etc. were recorded.

(1) *Mr. B. C. Burt* officiated as *President* during Dewan Bahadur *Sir T. Vijayaraghavacharya's* absence in England in connection with evidence before the Joint Parliamentary Committee.

(2) *Sir Purshotamdas Thakurdas* was out of India from the 6th May 1933 to attend the sessions of the Joint Parliamentary Committee in London and during his absence his place on the various Sub-Committees remained unfilled.

(3) *Mr. N. M. Deshmukh* takes the place of Rao Bahadur M. G. Deshpande as one of the cotton growers' representatives in the Central Provinces and Berar.

(4) *Mr. Janrao Bajirao Deshmukh* replaces Mr. M. P. Kolhe as one of the cotton growers' representatives in the Central Provinces and Berar.

(5) *Rao Bahadur M. G. Deshpande* has been appointed to represent Co-operative Banking in the place of Sardar Sampuran Singh.

(6) *Sardar Sampuran Singh* replaces Major D. Vanrenen as one of the Punjab cotton growers' representatives.

(7) No member has yet been appointed by the Government of India in the place of Mr. Mohammad Azhar Ali.

(8) *Mr. H. B. Moore* takes the place of Sir Joseph Kay as the representative of the Bombay Chamber of Commerce.

(9) *Mr. E. J. W. Plummer* replaces Mr. J. Tinker as the representative of the Upper India Chamber of Commerce.

(10) *Khan Saheb Farrukhbeg Sadikalibeg Mirza* has been appointed as an additional member in the place of Mr. Ghulam Mohammad Khan to represent the cotton growers of Sind.

(11) *Mashir Bahadur S. V. Kanungo* replaces Mr. C. R. Palairet as the representative of the Indore Durbar on the Committee.

II. Standing Finance Sub-Committee.

Sir Joseph Kay having resigned, his place on the Sub-Committee was taken by *Mr. H. B. Moore*, who succeeded him on the Committee.

III. Local Sub-Committee.

Sir Joseph Kay resigned his membership on the Committee and his successor, *Mr. H. B. Moore*, took his place on the Sub-Committee.

Mr. Girdharlal B. Kotak has temporarily gone out of India to Japan and his place on the Sub-Committee remains unfilled.

IV. Agricultural Research Sub-Committee.

Rao Bahadur M. G. Deshpande has taken the place of *Sardar Sampuran Singh* as the representative of Co-operative Banking. The vacancy caused by the resignation of *Sir Joseph Kay* remains unfilled.

Mr. T. F. Main has retired and his place on the Sub-Committee has not been filled as *Dr. W. Burns*, who officiates as Director of Agriculture, Bombay, is already a member of the Sub-Committee.

Messrs. W. Roberts and *B. A. Collins* are temporarily out of India. *Rai Sahib Kalidas Sawhney* has been co-opted a member of the Sub-Committee for this meeting.

The following have been invited to serve on the Sub-Committee for the meeting of August 25th, 1933 :—

(*a*) *Mr. K. V. Joshi*, Cotton Physiologist, Poona.

(*b*) *Mr. B. S. Patel*, Deputy Director of Agriculture, Gujerat, Surat.

(*c*) *Mr. Nizam-ud-din Hyder*, Director of Agriculture, H. E. H. the Nizam's Government, Hyderabad, Deccan.

V. Technological Research Sub-Committee.

Sir Joseph Kay having resigned, his successor on the Committee, *Mr. H. B. Moore*, has been co-opted on the Sub-Committee for the remainder of the current financial year.

Dr. W. Burns and *Mr. E. J. W. Plummer* have been co-opted on the Sub-Committee in the places of *Messrs. T. F. Main* and *J. Tinker* respectively.

Mr. Jamnadas Ramdas has replaced *Mr. Bhaidas Nanalal* as one of the co-opted members of the East India Cotton Association on the Sub-Committee.

SUBJECT 5.—*Cotton Transport Act, Indore.*

At the invitation of the President, *Mashir Bahadur Kanungo*, representing the Indore Durbar, opened the discussion emphasising the hardships consequent on the restriction of imports of all outside cottons into the Indore State except under license. In view of the increasing demand for quality cotton by Indore mills and the small amount available in the district imports from areas outside Indore became a necessity. The mill industry in Indore and the cultivators outside the State were not accustomed to the licensing system. And if the latter had to obtain licenses for taking their cotton to Indore and not to Ujjain they would naturally take it to Ujjain in preference to Indore. Under the circumstances a joint conference between representatives of the Indian Central Cotton Committee and the Indore mills, merchants and cotton growers to find a solution of the present situation seemed profitable.

An interesting discussion followed in which *Mr. Saklatvala* pointed out the desirability of Indore State falling into line with other Indian States. *Messrs. Burt* and *Jackson* were, however, in favour of a conference on the above lines, the latter urging it on grounds of the inte-

rests of the growers in Central India. It was then decided to refer the matter to a joint conference of Millowners in Indore, the Gwalior representative and the Local Sub-Committee of the Indian Central Cotton Committee.

SUBJECT 6.—*Cotton Ginning and Pressing Factories Act—Progress made in Indian States.*

The following note by the Secretary was recorded :—

"Since the last meeting of the Committee the following further information has been received regarding the progress made in Indian States in the introduction of legislation on the lines of the Indian Cotton Ginning and Pressing Factories Act and Rules.

Gwalior State.—The Council of Administration of the State has passed the draft of the Cotton Ginning & Pressing Factories Act based more or less on the lines of the British India Cotton Ginning and Pressing Factories Act. It is hoped that the Act will come into force in the near future.

Palitana State.—The Durbar framed a set of Cotton Ginning and Pressing Factories Rules which came into force in 1931 but of which no intimation was received here. Some of the rules were found to be incomplete in certain respects and necessary action has been taken to get them amended. Weekly press returns are not yet being received from the State.

The present position is that 65 States have now enacted legislation on the lines of the British India Act and 60 States supply weekly press returns."

SUBJECT 7.—*Licensing of Gins and Presses.*

Sardar Rao Bahadur B. R. Naik introducing the subject emphasised the necessity of enacting legislation against mixing of cotton by ginneries and presses as it was only by this means that the interests of cotton growers could be protected and the purity of Indian cotton maintained. Instead of wasting time over apportioning the blame as to who was responsible for this state of affairs, the grower, the merchant, the factory owner, the exporter or the millowner, it would be far more profitable to appoint forthwith a Special Sub-Committee to formulate definite proposals to put before Government.

Mr. Saklatvala said that opinion was almost unanimous that the practice of mixing was prevalent not only in the Punjab but was widespread all over the country. He pointed out that in the absence of an alternative programme by those who were against legislation, licensing of gins and presses became imperative. He urged the appointing of a Special Sub-Committee forthwith to draw up a draft bill embodying definite proposals so that no more time was wasted.

The question of the reasons for mixing of cotton was argued. It was said on the one side that cotton was mixed because there was demand for mixed cotton; on the other hand it was alleged that Indian cotton had a bad name because it was mixed. Which was correct? Either there was a demand for mixed cotton or there was some misunderstanding in foreign markets about India being capable of producing good staple cotton. If the latter was the case, the solution, according to Sardar Sampuran Singh, lay in the extensive propaganda in foreign countries.

Mr. Plymen, referring to the suggestion he had made in his letter before the Committee that it was not easy to keep Indian cotton pure, pointed out that the difficulty could be overcome by fixing standards for cotton as in the case of fruits and other articles.

Mr. Y. G. Deshpande took the view that factory owners who had nothing to do with the mixing of cotton would be unduly penalised by legislation, whereas the real culprits were the foreign firms and millowners who mixed cotton to bring down their average price. A better solution was the educating of growers by propaganda to the fact that mixing lowered prices of their cotton and would ultimately lead them to ruin.

Rao Bahadur G. R. Kothare stated that another remedy would be for the millowners to declare that they would want pure cotton and were prepared to pay a suitable premium for it, thus countering the activities of those unscrupulous competitors who, by means of mixing pure with inferior cotton, had so far more often than not been able to undersell.

Mr. Saklatvala suggested that the fear, that the guilty might escape and the innocent factory owner be penalised, might be got over by a proviso in the licenses stating that the factory owner was not responsible provided he had a declaration from the merchant that the cotton to be pressed was unadulterated. Small discrepancies could be overlooked.

The discussion then centred round the suggestion of adding an enabling section to the Act authorising Local Governments at their discretion to bring the section into force as and when they considered it necessary. As the new constitution for this country was not likely to be delayed for long, the reformed provincial Councils, it was argued, would be better fitted to handle the subject than either the Government of India or the Legislative Assembly. In the meantime it would be advisable to find out first from Local Governments whether circumstances prevailing in the provinces were such as required legislation, as in many cases a whole string of abuses occurring in some ginneries could be dealt with effectively by inserting an enabling clause.

By a resolution reaffirming that of 1924, the Committee recommended the Government of India that the Cotton Ginning and Pressing Factories Act should contain a clause providing for the licensing of gins and presses, and that this clause should be made operative in each province by resolution of the Provincial Legislative Councils.

SUBJECT 8.—*Cotton Marketing—Organisation of regulated Cotton Markets under the Bombay Cotton Markets Act.*

The President moved the following resolution :—

RESOLUTION.—"The Indian Central Cotton Committee congratulates the Government of Bombay for the steps taken by them towards the establishment of cotton markets in the Presidency and

trusts that the Local Government will continue their efforts in this direction by impressing upon local bodies in cotton centres the desirability of establishing regulated cotton markets wherever possible",

which was seconded by *Sardar Rao Bahadur B. R. Naik* and passed.

SUBJECT 9.—*Cotton Marketing—Madras Commercial Crops Markets Act.*

The Secretary's note was recorded.

SUBJECT 10.—*Report of the Cotton Forecast Improvement Sub-Committee.*

SUBJECT 11.—*Annual census of cotton stocks—Report on progress made.*

The meeting then considered the question of a better estimation of the amounts of cotton used in villages for local consumption in the shape of coats, quilts and hand spinning.

Mr. Burt opening the debate drew attention to the figure of 750,000 bales which, he said, had stood unaltered for a considerable period and might or might not be correct. He suggested that each province should go into the question on the lines recommended by the Cotton Forecast Improvement Sub-Committee. A scheme entailing an expenditure of Rs. 5,000/- for Madras and Rs. 2,500/- for each of the other seven provinces and States had been approved. The Sub-Committee had decided on the inclusion of Bengal and the United Provinces in order to get figures for village consumption from non-cotton growing districts. A further proposal for the co-option of the Deputy Director of Statistics was likewise adopted. He recommended that information regarding stocks of cotton held at Cawnpore be asked for from the Upper India Chamber of Commerce. This would not be difficult as was proved during the War in the case of grain stock when food control was in operation.

As to the suggestion that a report on the accuracy of the Broach cotton crop be published on the same lines as the report on the Central Provinces cotton crop, he referred to the decision arrived at in the meeting at Karachi in February last and said that the Forecast Sub-Committee, after considering the question of the publication of an annual review of the cotton forecasts for all-India, decided that, as rail-borne trade statistics would only be available in January, the first review should be put off till then. And before the annual review was published, the Director General of Commercial Intelligence and Statistics be consulted as to the actual wording of it.

Mr. Stewart's suggestion that the salary of the investigator be fixed at Rs. 100/- p.m. on the average for each province to enable a little higher or lower salary being paid to the investigators according to individual merit was considered and adopted.

Mr. Vonesch enquired as to how loose cotton going to non-cotton growing areas will be accounted for.

Mr. Burt stated that by including Bengal in the scheme the amount of cotton consumed in the non-cotton growing areas will be estimated.

Mr. Saklatvala pointed out that the amount of loose cotton used for making quilts, wicks, tapes etc. etc. in villages and towns was sufficiently high and could not be neglected.

Mr. Burt thought it desirable to confine attention to villages for the present. The question of towns might be taken up later.

Mr. Plymen suggested that to determine the total amount of cotton produced only the quantities sent to presses and those consumed by the rural population directly from the fields need be considered. He desired that an exhaustive enquiry that takes into consideration both cotton which is sold in small quantities and cotton which is used for domestic purposes should be undertaken.

Sardar Rao Bahadur B. R. Naik then moved the following resolution :—

RESOLUTION.—"That the Report of the Cotton Forecast Improvement Sub-Committee be adopted."

This was seconded by *Khan Bahadur Sardar Habibullah* and carried unanimously.

SUBJECT 12.—*Formation of a Cotton Association at Karachi.*

The Secretary's note regarding the transfer of the functions and liabilities of the Karachi Joint Cotton Committee to the Karachi Cotton Association Ltd. was recorded.

SUBJECT 13.—*Cotton Policy in Surat.*

SUBJECT 14.—*Goghari sowings in Navsari Tract.*

The Secretary's note regarding the postponement of the discussion on these subjects owing to the absence from the meeting of the Local Sub-Committee held on the 9th of August of a full quorum of all interests concerned and Technological Laboratory tests not being fully available was recorded.

SUBJECT 15.—*Universal standards for Indian Cotton.*

The question of introducing universal standards for Indian cotton having been considered by the full Committee at its 26th meeting held on 2nd February 1933, the Local Sub-Committee, which had been appointed to prepare a scheme for this purpose, in conjunction with the various trade associations, again in turn nominated a small Committee called the Standards Sub-Committee consisting of five members representing trade and agricultural interests concerned to prepare in Karachi standards acceptable to both the East India Cotton Association and the

Karachi Cotton Association, and to ascertain from the latter the most suitable time for the preparation of these standards. Negotiations with the East India Cotton Association had been proceeding and the *President* informed Mr. Chunilal B. Mehta in reply to his question that the East India Cotton Association had no objection to nominating members provided that the standards fixed would become binding only after approval by their Standards Committee and that the work of preparing standards was undertaken in Bombay.

On the question as to whether Bombay or Karachi were to prepare standards of Punjab-American cotton, it was decided to leave the matter to the Local Sub-Committee for necessary action.

SUBJECT 16.—*Proposed introduction of a common unit for the purchase of seed cotton throughout India.*

During the last three years the question of standardization of weights for cotton transactions has engaged a considerable portion of the Committee's time and attention. At its 26th meeting in February 1933, the Committee considered a letter from Mr. Collins suggesting a unit of 700 seers (1440 lbs.) or 350 seers (720 lbs.) for seed cotton throughout India. As the East India Cotton Association were in favour of a unit of 784 lbs. and the Karachi Joint Cotton Committee one of 82 2/7 lbs. it was decided to defer consideration till the Secretary obtained the views of the Local Governments on the matter of introducing common units within their provinces and as between different provinces. All Governments had been circularized for their opinions and replies from all had not yet been received.

In the discussion which followed *Mr. Burt* was strongly in favour of the railway maund as it was based on the unitary weight of a rupee or tola, with which weight the cotton grower everywhere was familiar. In reply to a suggestion from *Mr. Vonesch* that if the Bengal maund was adopted it would involve calculations in lbs., qrs. etc., *Mr. Burt* said that what was under discussion was the standard unit of weight for *kapas* (seed cotton) and not baled cotton. *Mr. Barnes* was in favour of each market having its own weights. *The Hon'ble Mr. Vellingiri Gounder* suggested that a 28 lb. maund be fixed as the uniform standard weight, as it would facilitate the calculations of the prevailing Bombay rate. At the suggestion of *Mr. Chunilal B. Mehta* that the consideration of the matter be deferred till replies were received from all the Local Governments, further consideration of the question was postponed.

SUBJECT 17.—*Greater use of Indian Cotton in the United Kingdom—Implementing Article 8 of the Ottawa Agreement—Report on progress made.*

Mr. Burt hoped the Committee would express its appreciation of the work of the Indian Cotton Enquiry Committee whose first memorandum received soon after the Karachi meeting had been fully answered. Their second memo, which was just circulated, showed how, following the

successful experiments carried out in Lancashire with Indian cotton, the demand for it could be progressively developed. Seventy-four different types of cloth involving 44 types of yarn which had previously been made from American and Egyptian cottons had been manufactured from Indian cotton and exhibited to the trade.

A resolution was moved expressing appreciation of the work already done by the Indian Cotton Enquiry Committee and asking them to extend the scope of their operations to some of the other Indian cottons.

This was seconded by *Mr. Saklatvala* who desired to make similar experiments in his own mills using Indian weft in conjunction with American warp as Lancashire had so successfully demonstrated.

The resolution was unanimously carried.

SUBJECT 18.—*Representation of the Committee on the Board of Governors of the Institute of Plant Industry, Indore.*

The proposal of appointing Mr. Chunilal B. Mehta and Seth Kasturbhai Lalbhai as additional members to the Board of Governors of the Institute of Plant Industry as suggested by the Standing Finance Sub-Committee was put to vote and carried by a large majority.

SUBJECT 19.—*Appointment of cotton growers' representatives on the Board of the East India Cotton Association and question of payment of their travelling allowance.*

Under Section 4 (3) (*a*) of the Bombay Cotton Contracts Act, 1932, the growers' representation by the Committee was increased from 2 to 3 on the Board of the East India Cotton Association. As this was accepted by the Committee, the *President* suggested the allotment of a fixed amount to be distributed among their representatives for travelling expenses. He called for nominations. Messrs. N. M. Deshmukh, Sardar Rao Bahadur Bhimbhai R. Naik and Mian Nurullah were eventually successful as the result of a ballot between the four names proposed. A sum of Rs. 10,000/- to be distributed evenly among the three selected members was allotted and was to be accounted for by the individuals concerned. *Mr. Vonesch* suggested that at the end of the year the representatives should submit a resumé of their activities in the interests of the growers. This was agreed to. A resolution that the sum of Rs. 10,000/- be divided equally among the three members was proposed by the *President*, seconded by *Mr. Vonesch* and was unanimously carried.

SUBJECT 20.—*Summary of Proceedings of the Local Sub-Committee.*

The Secretary's note summarising the proceedings of the four meetings of the Local Sub-Committee, held since the 26th meeting of the full Committee, was recorded.

SUBJECT 21.—*Report of the Standing Finance Sub-Committee on the fumigation of American cotton.*

The report of the Standing Finance Sub-Committee on the question of a reduction in charges for fumigating American cotton from Rs. 3/1 per square bale and Rs. 1/13 per round bale to Rs. 2/8 per square bale and Rs. 1/8 per round bale with effect from the 1st April 1934 was adopted, put to vote and unanimously carried.

SUBJECT 22.—*Agricultural Research—General Progress Report.*

The Secretary's note regarding the General Progress Report on Agricultural Research Schemes was recorded.

SUBJECTS 23 to 41, 44 to 57, 68 to 70, 72.—*Progress Reports on Agricultural Research and Seed Distribution and Extension Schemes and Report of the Agricultural Research Sub-Committee.*

The President suggested that the recommendation regarding the Final Report on the Surat Physiological Scheme to be published by the Imperial Council of Agricultural Research in the "Indian Journal of Agricultural Science", after a further revision by Mr. Joshi, be adopted, or if it cannot be sufficiently condensed to be published as a monograph. It may be referred to the Editorial Committee of the Council in the usual way.

This was agreed to.

The recommendation of the Sub-Committee on the Progress Report on Surat Boll-Worm Clean-up Scheme was adopted.

The Sub-Committee considered that excellent work had been done and that the clean-up work was very thorough. It noted with satisfaction that out of the whole area of 81,000 acres under cotton in the tract selected the cultivators themselves cleared up all the cotton sticks excepting the small area of 5,350 acres which was cleared up by direct action by the 23rd May.

The Sub-Committee, however, emphasised the necessity of making extensive observations on the present year's crop in order to study the effect of last year's clean-up on the boll-worm population in it.

It recommended the extension of the scheme by two months for the above purpose from funds available from the savings of the present year.

The Progress Reports on Broach Cotton Breeding Scheme and the Jalgaon Cotton Breeding Scheme were adopted. The Sub-Committee agreed that both these schemes should be continued.

The Progress Report on the Sind Physiological Research Scheme was approved. The Committee recorded that considerably more land was required for field experiments now being conducted and unless this was allotted the programme might have to be curtailed.

Mr. Jenkins, explaining his doubts as to whether the lower yield of the experimental plots was entirely due to high temperature and Red Leaf-

disease, said he would like to amend the first sentence of para 6 on page 4 of the Agricultural Research Sub-Committee's Report in question to read as follows:—"The results of the manurial experiments designed to discover the best time for applying a quick-acting nitrogenous manure to increase the yield were found to be vitiated by the partial failure due to bad opening."

This was agreed to.

The Progress Report on the Madras Herbaceum Scheme was adopted.

(The original object of this scheme was to obtain by selection suitable strains from local Uppam equal to Karunganni in yield and spinning quality under similar conditions. The scheme was extended in 1930 for a further period of five years in order to obtain by hybridisation what unit selections had failed to achieve).

It was opined that selection on the basis of high yield was premature at the present stage of the work, and that the first step should be to purify desirable types by single plant selection.

The Progress Report on the Madras Fodder Cholam Scheme was adopted.

(This scheme aims at an investigation into the harmful effects of fodder *cholam* when compared with *cumbu* on the succeeding cotton crop.)

The method used for the determination of nitric nitrogen, it was urged, was important and should have been stated. Conclusions could not be drawn owing to insufficient nitrogen data. With reference to the observation in the Report that the stubbles were not the real seat of the depressing factors, and that farmyard manures prepared separately with *cumbu* and *cholam* straws did not make any difference to *cumbu* crop or the succeeding cotton crop, the Sub-Committee pointed out that more replications were necessary before a negative result could be deduced.

It was also held that a comparison of the quantity and nature of the soil colloids present in Tinnevelly soils after cropping with cholam, cumbu and cotton respectively offered prospects of a profitable line of work.

Recommendations were made that field experiments on liming should be postponed meantime and doubts were expressed regarding the value of sand culture experiments.

The Progress Report on the Madras Pempheres and Physiological Research Scheme was adopted.

(At present the Cotton Specialist, Coimbatore, is in charge. Two officers of the Madras Agricultural Department are being trained to occupy the posts of Physiological Botanist and Bio-chemist.)

It was pointed out, however, that there was important entomological work to be done if the scheme was to be a success.

The Progress Report on the Punjab Botanical Scheme was adopted.

(159 American and 81 *Desi* pure line families have been tested for various characters, such as, resistance to jassid attack, effects of watering manure treatment, date of sowing etc.)

As regards the Punjab Entomological Research Scheme, the Report on the Biological work done up to the end of cotton season 1932-33 was adopted.

The Sub-Committee was of opinion that very valuable results have been produced. It has been determined, for instance, that (1) the difference in the incidence of the Pink Boll-Worm between the Canal Colonies and the S. E. Punjab is mainly on account of differences in temperature and humidity, (2) that high temperature checked propagation.

Further observations are needed to complete the investigation on the correlation between incidence and meteorological factors, and this has now been provided for in the new Spotted Boll-Worm Research Scheme.

It was recommended that the report should be sent for publication by the Imperial Council of Agricultural Research and that the author might be permitted to revise it as requested by him.

The Progress Report on the Punjab Cotton White Fly Scheme, which showed satisfactory work during the year, was adopted.

(It has been discovered that *Desi* and American cottons are equally affected by the pest, but in years of severe infestation the Americans suffer more. The life and habits of this pest have been studied. An effective way to destroy them is by spraying with rosin compound or fish oil soap.)

The Progress Report on the Central Provinces Botanical Scheme was adopted.

(Late Verum has once again proved its superiority over all other types. Two new strains 438 and 434 show good promise. Work on Bani was continued.)

Progress Report on the Punjab Root Rot Scheme was similarly adopted.

When the Annual Report of the Institute of Plant Industry, Indore, came up for discussion, *Mr. F. K. Jackson*, the Director, expressed his gratification on the remarks of the Sub-Committee, on the Annual Report of the Institute of Plant Industry, Indore, which was satisfied that full attention was now being given to the work on cotton at the Institut.

The Sub-Committee suggested (1) that the programme of work on cotton physiology seemed much too extensive and beyond the capacity

of the present staff and laboratories, and recommended that the aim of the work be more clearly defined ; (2) research work on cotton wilt required modification in the light of the final report on the work on cotton wilt in Dharwar.

The report was adopted.

The Progress Report on the Burma Cotton Improvement Scheme was approved and adopted.

(The object of this scheme is to bring home to the cultivator in the Wagale tract the improved methods of cultivation. Demonstrations have been given in suitable centres.)

The Progress Report on the Hyderabad Botanical Research Scheme was adopted and the Progress Report on the Hyderabad Cotton Survey Scheme was approved.

(Six new strains of Gaorani, Bani 306, Parbhani 4 and Verum 262 were tested against Gaorani Umri and useful data obtained. Work on selection, hybridisation, and experiments with American and Egyptian varieties was also done.)

(Work on the Survey Scheme included testing of 139 samples of seed from representative villages. The results showed that the crop grown in Nanded, Bir, Bidar, Osmanabad, and Adilabad districts mainly consists of three species viz., *G. Indicum, G. Neglectum* and *G. Hirsutum.*)

The Progress Report on the Bikaner Gang Canal Scheme was approved.

(Mollisoni, N. T. 12, Cawnpore 520, Cawnpore 402, and Punjab-American 289F were compared for yields. Irrigation and sowing date and manurial experiments were carried out and important results obtained.)

The Progress Report on Baroda Root Rot Scheme was approved.

The Report of the Sub-Committee on the Progress Report on Surat Seed Distribution and Extension Scheme was approved.

(During the year under report there were in Surat-Broach area 20 depots which distributed for sowing 6,07,176 lbs. of 1027 A.L.F. cotton seed. The Agriculture Department was able to supply 1,778,258 lbs. pure seed to Rajpipla, Chhota Udaipur, Cambay, Jambughoda and Baroda States.)

The Report of the Sub-Committee on the Progress Report on Khandesh (Banilla) Seed Distribution and Extension Scheme was approved.

(This scheme embraces six stages from producing useful seed on an area of 5 acres to covering the whole Khandesh tract with pure seed. Three stages are complete.)

The Sub-Committee observed that the areas under each stage of multiplication were not being realised and were of opinion that the supply of sowing seed for distribution in the Districts should only be undertaken after the total areas under the different stages of multiplication under the scheme have been supplied.

The Report of the Sub-Committee on the Progress Report on Athani Seed Distribution and Extension Scheme was approved.

(From 1100 acres of selfed seed at Kagwad, 122,000 lbs. of pure seed was obtained for distribution to cultivators during 1933-34.

The Sub-Committee noted with satisfaction that the Progress Report on Sind Seed Distribution and Extension Scheme was up to date and their report was approved.

(The main object of work on the right bank of the Indus is to ascertain the possibility of cotton cultivation on a large scale and give demonstrations to zamindars and growers. On the left bank of the Indus varietal tests in replicated plots confirmed that 27 W. N. is the best yielder. 285 F-2 and 289 F-1 might prove satisfactory in Jamrao tract. Encouraging yields were obtained with high class cottons like Sea Island 2-4, Ashmouni 37 and Boss *III-16*.

About 5200 maunds of pure seed of 27 W.N. were made available to cultivators.)

The Report of the Sub-Committee on the Progress Report on Madras Tiruppur and Co. 2 Seed Distribution and Extension Schemes was approved.

(A seed farm area of 1988 acres in different areas for growing Co. 2 seed was organised by the Department of Agriculture.)

The Report of the Sub-Committee on the Progress Report on Hyderabad Seed Distribution and Extension Scheme was approved.

(The total quantity of pure seed distributed during the year was 340,856 lbs.—303,042 lbs. of Jayawant and 37,814 lbs. of Gadag I—which was sown in an area of 18,926 acres. Arrangements have been made to produce locally the whole quantity of Jayawant seed for distribution.)

The Report of the Sub-Committee on the Progress Report on Central Provinces Seed Distribution and Extension Scheme was approved.

(The Department of Agriculture was able to distribute 10,52,650 lbs. of Verum seed sufficient for 71,115 acres.)

On the President's recommendation, the scheme for the Survey of Small Leaf Disease of Cotton in Bombay Presidency—a new scheme which had been approved by the Sub-Committee and the Agricultural Research Sub-Committee, was approved.

(This disease, which manifests itself in reduced size of leaves, sterility, etc. exists in the Southern Maratha Country, the damage varying from 5 to 15 %. Almost all varieties of cotton are susceptible to this disease.)

The scheme for an investigation into the causes of the periodic partial failure of the American cotton crop in the Punjab as recommended by the Sub-Committee was approved.

(It is proposed to tackle the problem from the agricultural, botanical, entomological, physiological and bio-chemical aspect).

The recommendations included the appointment of a Plant Physiologist on Rs. 500 to Rs. 700 and the construction of a temperature control chamber costing about Rs. 40,000.

The Scheme for an investigation of certain aspects of the Spotted Boll-worm in the Punjab and for continuation of work on the Pink Boll-worm, as recommended by the Sub-Committee, was approved.

(At its meeting held at Karachi on the 31st January 1933, the Sub-Committee had referred back the scheme to the Director of Agriculture, Punjab, with a request to prepare a new scheme for control measures after a study of the work done at Surat. The Director of Agriculture has, therefore, submitted a combined scheme for investigation on Spotted and Pink Boll-worm. But he was of opinion that Surat conditions did not apply to the Punjab).

The scheme for installation of defibrating and delinting plant for experimental purposes in the Punjab as recommended by the Sub-Committee was approved. The Sub-Committee remarked that the same problem occurred in Madras with regard to Cambodia cotton.

It was agreed that the scheme for the propagation of C. 402 cotton in the Hardoi District (Oudh) as recommended by the Sub-Committee should be referred back to the Registrar of Co-operative Societies with the suggestion that he should, (as this Department should be responsible for a scheme of this nature), after consulting the Director of Agriculture, put up a scheme satisfactory to both of them for consideration at the next meeting of the Committee.

The Sub-Committee had negatived the application of a loan from the Committee for setting up a ginning and pressing factory at Bailhongal. This subject evoked a long discussion at the Committee meeting.

Rao Bahadur Shirahatti emphasised that it was impossible for the Indian Central Cotton Committee to maintain the purity of improved strains by means of seed distribution schemes without the aid of co-operative ginning and pressing factories. These factories would also promote the co-operative sale movement on a large scale and thus benefit growers and consumers alike. For these reasons, and also to preserve high class cottons and lift the boycott imposed by Bailhongal dalals, it was necessary to have a factory there.

Mr. Burt referred to the Sub-Committee's opinion that it was much too risky to invest about a lakh of rupees under conditions mentioned in the application.

The President said that the Director of Agriculture, Bombay, was strongly opposed to the scheme.

Rao Bahadur Shirahatti requested the Director of Agriculture, Bombay, to tell the Committee how the application should be presented.

Sardar Sampuran Singh welcomed the proposal as it would solve the problem of getting pure cotton. The Committee ought to help the Society and thus encourage similar private enterprises. He urged that the Bombay Director of Agriculture's objection could be overcome and the scheme should not be further delayed.

(*The President* then decided to postpone consideration of the subject to the following day).

GENERAL.

The question of grants for scholars receiving foreign training and their control and supervision while abroad by the High Commissioner for India was considered and the Committee was gratified to note that the High Commissioner had signified his willingness to undertake these duties, and had made certain suggestions intended to safeguard the interests of the Committee in this connection.

SUBJECT 56.—*Proposed new Seed Distribution and Extension Schemes—Application for a loan from the Committee for setting up a ginning and pressing factory at Bailhongal.*

Rao Bahadur Shirahatti having opposed the rejection by the Sub-Committee of this scheme on the previous day was allowed to proceed with his speech now that Dr. Burns had returned to attend the meeting. The *Rao Bahadur* appealed to the Committee to allow the sale societies to have their own ginning and pressing factories which would place them in a position to defy the middlemen who were mainly responsible for the mixing of cotton and who could employ the weapon of boycott to intimidate the society as had actually happened on several occasions. The factory would furthermore prove instrumental in checking all malpractices now prevalent. The Bailhongal Cotton Sale Society could modify their scheme and the Director of Agriculture had agreed to reconsider the matter if it was sent in an amended form. Provided adequate security is furnished, the Indian Central Cotton Committee should be prepared to allow long term loans at a concessional rate of interest, and the scheme could be further examined in all detail jointly by the Director of Agriculture and the Registrar of Co-operative Societies.

Dr. Burns gave a history of the original proposal which was for a loan of Rupees one lakh without interest repayable in 25 years time and a much smaller sum in the shape of shares, and when this fell through, another proposal showing the details of the working capital of the Society was submitted. The Civil Disobedience movement having hampered the progress of the working of the Society, the members now reduced their request to Rs. 60,000 as they proposed to purchase a second hand press. Another Rs. 34,000 were required to cover the annual working cost and depreciation. He doubted whether judging by the way the Society had hoped to meet the expenditure the scheme could at all be successful. Unless a revised scheme was put up he was not prepared to support it. He wanted to know (*a*) whether the Indian Central Cotton Committee was prepared on principle to support the erection of a ginning factory by a sale society to make it possible for them to work without obstruction and in view of the most important part the society has played as a propaganda agency and (*b*) whether the Committee should consider the scheme at all now. Supporting the proposal *Mr. Y. G. Deshpande* desired the Committee to refrain from charging interest on such loans and suggested the erection of a similar factory at Amraoti if the loan was granted. This view was shared by *Sardar Sampuran Singh* who thought the erection of a ginning factory to be the best preventive remedy against admixture and the determined opposition from middlemen. *Messrs. Plymen and Stewart* saw no necessity for the inclusion of a pressing factory in a scheme meant to produce pure seed and stated that the loan of a ginnery could always be secured under the supervision and control of Agricultural Officers. *The Hon'ble Mr. Vellingiri Gounder* was in favour of the Society having its own ginnery but saw no necessity for a press. *Mr. Jenkins* and *Sardar Rao Bahadur B. R. Naik* thought the case was one for the Bombay Provincial Co-operative Bank. The Committee was not competent to grant loans without interest. The compliance with this request would encourage endless applications for similar loans. Another reason which forced them to refuse the request was the definite opinion expressed by the Registrar of Co-operative Societies that any factory pressing less than 4,000 bales could hardly be expected to be self-supporting. *Sardar Rao Bahadur B. R. Naik* was therefore for the resubmission of the scheme in a modified form. *Mr. Burt* likewise supported the idea of a ginnery but not a press. He doubted the soundness of a business started with borrowed money and was of opinion that if share capital could be raised the Provincial Co-operative Bank might provide funds for seasonal working and the Committee could assist by granting small loans to meet other expenses. He moved a resolution that the scheme be referred back for revision and resubmitted at the next meeting. This was seconded by *Sardar Rao Bahadur B. R. Naik* and carried.

The Report of the Sub-Committee on the extension of the Sind Seed Distribution and Extension Scheme was adopted.

According to the recommendations of the Sub-Committee future work should be concentrated and intensified on the extension of the cultivation

of medium and long stapled improved varieties suitable to replace imported varieties used by Indian mills. Only in areas where this was not advisable should Sind *desi* be extended.

The extension of the Hyderabad Botanical Scheme was agreed to. As recommended by the Sub-Committee two of the four proposed testing Stations were dispensed with and re-grading of posts of the first and second Assistant Cotton Research Botanists was considered unnecessary.

The Report of the Sub-Committee sanctioning the extension of the Madras Pempheres and Physiological scheme for a period of five years from September 1933 and making other recommendations was approved.

The extension of the Central Provinces Botanical Scheme was sanctioned subject to the condition that the pay of the Economic Botanist is met by the Central Provinces Government and only his special allowance is met by the Committee.

The President then moved that the Report of the Agricultural Research Sub-Committee be adopted. The resolution was seconded by *Mr. Saklatvala* and carried.

SUBJECT 42.—*Seed Distribution and Extension Schemes-Progress Report on Hubli Scheme.*

SUBJECT 43.—*Seed Distribution and Extension Schemes—Progress Report on Gadag (Extension) and Gadag (Supplementary) Schemes.*

Dr. Burns, introducing the report of the Sub-Committee and drawing attention to the question of distribution of subsidy, the amount of seed dealt with and the area covered, referred to the difficulty of inducing people to take to seeds until a knowledge of the behaviour of the type of cotton and the price it would fetch was available. He remarked that his recommendation for a flat rate per bag for both the Hubli and Gadag Societies in place of the present system had been left to be decided by the Standing Finance Sub-Committee.

To a question by *Rao Bahadur M. G. Deshpande* regarding the surplus of 4 lakhs lbs. of seed, *Rao Bahadur Shirahatti* replied that only 400 to 500 bags were left unsold and this balance was only suitable for cattle food.

The adoption of the report was proposed by *Mr. Vonesch* and carried.

SUBJECT 58.—*Technological Research—Progress Report of the Director, Technological Laboratory.*

The meeting proceeded to consider the Progress Report of the Director, Technological Laboratory.

At the outset *Mr. Saklatvala* said that he thought the Director could be congratulated on another year of valuable work. The only criticism

he could make was that nothing had been done by the Committee to improve the clean picking of cotton in any of the provinces. In view of the efforts to increase consumption of Indian cotton in Lancashire an effort should be made in this direction. He advocated a searching enquiry in the various provinces to devise some such scheme and to remedy faults in the process of ginning. Though the prize scheme had been turned down there was surely an alternative. He advised a reference to the Director of Agriculture in various centres enquiring their opinions on the methods of picking now in operation in their areas and asking for suggestion to remedy any existing evils. In his opinion the very fact that the Committee were inaugurating measures for improving picking would enhance the reputation of Indian cotton in other markets.

In reply to a question from *Mr. Sane* on the subject of spontaneous combustion of cotton, *Dr. Nazir Ahmad* said that the results of some recent experiments on bales in which known quantities of water and unsaturated vegetable oils were put to find out whether spontaneous combustion resulted had proved that no cases had occurred as a result of saturation of cotton with water and vegetable oils but that further experiments by keeping bales under heavy pressure were in view and would be made immediately the monsoons were over.

Mr. Stewart said that though extensive experiments had been carried out in the Punjab in the direction of clean picking it had been proved that any small premium obtained was not commensurate to cover the extra cost involved. *Messrs. Jones and Plymen* agreed that the only practicable method of improvement was during the process of ginning and that this method was more economical than clean picking by hand.

Rai Sahib Kalidas Sawhney and *Mr. Ramanatha Iyer* corroborated the opinion of Messrs. Jones and Plymen as regards operations in their own provinces respectively of Hyderabad and Madras.

Sardar Rao Bahadur B. R. Naik supported the views of Mr. Saklatvala and thought that the cultivator should be educated by propaganda and the offer of a bonus to devote special attention to clean-picking.

Mr. Jackson expressed surprise that Sardar Rao Bahadur B. R. Naik should advocate a policy detrimental to the interests of the growers whom he represented. In his opinion clean picking did not pay and it was risky to go on with a scheme unprofitable to the cultivator.

Rao Bahadur C. S. Shirahatti related his experience of the clean-picking of selected Kumpta in combination with Messrs. Tata Prize Scheme. The first year it was ineffectual, only 100 dokras being collected. The next year increased prizes were offered but as rain threatened the Dharwar cultivators grew nervous as to the fate of their crops and rushed the picking with the result that all the cotton contained leaf, trash etc.

Mr. Saklatvala said it was evident that experiments had been made though results had not been reported to the Committee, and he asked

Directors of Agriculture and others to explain where and how the extra cost occurred and why it was not compensated for. He advised the Committee not to accept a general statement such as Mr. Jackson had made, that clean picking was uneconomical. Naturally it was impossible to obtain a higher price for the results of isolated experiments but once the practice became universal, prices were bound to improve.

Concluding the discussion *Mr. Burt* explained that there was a measure of misunderstanding about the question of clean picking. In the parts of India where there was the greatest need it was not a case of the cultivator deliberately doing anything wrong, but generally speaking owing to the smallness of the yield it was difficult to pick frequently. In places where weather conditions were favourable and the yield was small, it might be more profitable to clean the cotton by machinery rather than by hand.

The President moved and *Mr. Saklatvala* seconded :—

RESOLUTION—"That the Progress Report of the Director, Technological Laboratory, be adopted."

The motion was carried.

SUBJECT 59.—*Technological Research—Report of the Technological Research Sub-Committee.*

The Report of the Technological Research Sub-Committee was considered and approved. The Committee was gratified to know that the help of the Laboratory was being extensively requested by the Agricultural Departments and the Trade in testing samples. Investigations of deterioration of cotton during storage both in the open and inside sheds that were conducted at Karachi and the submission of periodical reports of the extent of any deterioration occurring were noted. The recommendation of the Technological Research Sub-Committee for enquiring into the most economical method of removing dirt and leaf from Indian cottons at the Laboratory was approved. Other recommendations of the Sub-Committee, such as Mr. Richardson's agreement, fees chargeable for spinning tests on combed cottons, were likewise accepted.

Referring to the question of boycott of Indian cotton by Japan the *President* suggested at the outset that the Committee should concentrate their attention on this important matter and asked Mr. Burt to introduce the subject.

Mr. Burt moved the following resolution :—

RESOLUTION—"That a Special Sub-Committee be appointed to discuss the question of a wider market for short staple cottons, and that a representation be made to the Government of India to give the Indian Central Cotton Committee an opportunity of stating their views on the question during the course of the negotiations with Japan."

He then referred to the fear expressed by some members that the threatened boycott of Japan would reduce the demand for short-stapled Indian cotton. It was a question whether there would be a boycott. Last year although there was no talk of boycott, Japanese consumption, he pointed out, had fallen drastically by 3/4th million bales. India, therefore, required not only a larger market for her surplus short-stapled cotton but also a better proportion of her short, medium and long-stapled cottons. The present situation was that although India had a large exportable surplus of short-stapled cotton the Indian mills had very often been unable to obtain adequate supplies of medium-stapled cotton and were forced to import foreign cotton. In view of the fact that the Technological Research Sub-Committee had decided to appoint a Special Sub-Committee to consider the question of a wider market for short stapled cotton and as negotiations between Government of India and Japanese delegates were going on, he thought it was desirable that the Indian Central Cotton Committee should be allowed to express its views.

In seconding the resolution *Mr. Chunilal B. Mehta* referred to the effect of the boycott on the cultivators especially those of Central Provinces and Berar where prices had already fallen by Rs. 15 per candy. Japan was a large customer buying annually about 20 lakhs of bales and unless the boycott was raised the prices were likely to fall to about Rs. 50 per candy below world parity in November and December. The prices of long-stapled cotton, he added, were bound to fall in sympathy. It would take a considerable time to find out a market for 20 lakhs of bales and he therefore urged that the Committee should lose no time in acquainting the Government with the seriousness of the situation.

Replying to a question from *Main Nurullah* as to whether the second part of the resolution represented the growers' or the millowners' views, *Mr. Burt* said that the views were those of the Indian Central Cotton Committee. It was extremely probable that the Government of India would appoint a certain number of unofficial advisers and he expected an invitation from the Government to nominate a representative on this panel. Under the circumstances it was advisable to waste no time in forwarding the resolution to the Government of India. In reply to another enquiry from *Mian Nurullah* as to whether their nominee would be a millowner or a grower and whether he would carry out the Committee's instructions or only forward to Government the proceedings of the Special Sub-Committee, *Mr. Burt* made it clear that the Committee's nominee would represent the growers' views, the millowners having a representative of their own. *Mian Nurullah* supported the first part of the resolution and stated he was prepared to support the second part only if a growers' nominee was appointed, otherwise he preferred an amendment of the resolution so as to make it acceptable to the whole Committee. Pointing out that the full effect of the boycott would be felt when the new crop began to move he recommended the Committee to

be both quick and cautious in their handling the situation. He gave details of the Japanese consumption during 1928-32 and stressed the importance of not losing so valuable a customer. He continued that it was a fundamental principle of business that prices depended on the law of supply and demand and the operation of this law was already being felt as the mere threat of boycott on the 9th June had lowered prices by Rs. 9 in the period of a fortnight. In the event of a continuance of the boycott the prices of Oomras and Broach would probably fall by about Rs. 61 and Rs. 39 respectively and in support of his statement quoted an extract from a Central Provinces paper showing prices to have already declined by about Rs. 20 to Rs. 25 per candy and calculated that if all-India figures were taken the loss for the country would amount to about Rs. 12 crores, the share of his province alone being about 2½ crores of rupees. He was of the opinion that the threat of boycott was no mere bluff. Lancashire had already proved that good cloth could be produced from Indian cotton but had the Indian mills used more Indian cotton? On the other hand they had imported large quantities of foreign cotton on account of its comparatively low price. The Agricultural Department too, he thought, could help the growers by the free distribution of pure seed and an increase in the area of medium-stapled cotton which would find a ready market in Lancashire. Quoting an Urdu paper to show that Japan had already purchased 2,00,000 bales of Iran (Persian) cotton and was trying to buy more from Peru, Mexico and China, he concluded with an appeal for immediate relief to the growers.

Mr. Saklatvala, refuting some of the statements made by the previous speaker, asked the members not to take a narrow view of the situation but ascertain by a critical examination whether the growers' interests were really imperilled. In his opinion, it would certainly not pay Japan to buy Persian cotton owing to excessive inland freight. He quoted from a memorandum prepared by himself explaining why it was impossible for Japan to give up Indian cotton in the near future. From details of cotton purchased by Japan from India and China it could be seen from the import figures that only 10 to 12% of Japanese purchases of cotton returned in the state of finished goods and the remaining 88 to 90% were used for the demands of other markets. It was unlikely, therefore, that on account of a difference of opinion Japan would be so foolish as to lose her other markets by refusing to purchase Indian cotton. Referring to the fall in prices alleged to have been caused by the boycott *Mr. Saklatvala* believed it to be fortuitous and dependent on several other factors besides the boycott. Proceeding he cited the case of Central Provinces where in the past long-stapled cotton capable of being spun into 30's warp counts had been replaced by the short stapled Roseum for which the Japanese had created a demand but which they cleverly bought at low prices by deferring their purchases till the off-season when prices had gone down. The Central Provinces could easily revert to long stapled cotton which would benefit the country as this cotton was in demand not only in Japan but in Lancashire and India itself. If the Indian mills were let down on the plea that because she took a few lakhs of bales, Japan had

a right to dump her goods in India it would mean the adding to the long list of mills which had already closed down and the consequent drop in the consumption of Indian cottons. And those which were working could only use about 75% of their spindles and 70% of the looms. The interest of the mills and the growers, he emphasised, were mutual as unless the latter were prosperous the former could find no market for their cloth. Indian mills had for years helped India by selling cloth at under cost but little credit was given to them for it. On the other hand, Japan who had done nothing for India could by the mere threat of boycott 'put the wind up' the growers. Referring to the charge of inefficiency, which had been attributed to the Indian mills he pointed out that not only India but even Lancashire and Germany had experienced the effect of Japanese dumping. He instanced Japanese cement which was selling at Rs. 30 including Rs. 18 duty as against India's Rs. 30 to 32 which was practically cost price. Though unduly delayed, the mere fact that Government granted protection to the mill industry against imports from Japan was a sufficient indication that the industry was conducted in a reasonably efficient manner. He agreed that if a new agreement with Japan was to be made the Indian Central Cotton Committee should be represented and that the Special Sub-Committee should enquire into the question of boycott first and then into the finding of wider markets for Indian cotton. He was not against a grower being nominated provided that he would express the Committee's views and not confine his activities to the growers' interest only. As Japan had already purchased 12,00,000 bales she could afford to create a panic and come out in the market when prices were low. The fact of the matter was that Japan only bought when cotton was cheap. She would never give an undertaking to buy 15 lakhs bales annually and no suggestion had been made for a guarantee even in the event of a settlement. In similar circumstances when Indian pig iron was cheap Japan bought, but as soon as her own industry was on its legs, she raised the duty on Indian pig iron which to-day bore a duty of 250%. He finally supported the formation of a Special Sub-Committee to go thoroughly into the boycott question and to advise the full Committee as to the views to be placed before the Government of India and to devise some means of finding new markets for Indian cotton.

Mr. Y. G. Deshpande also thought that it was unlikely Japan would give any promise of buying 15 lakhs bales each year. Japanese competition was not the only cause of the deplorable state of the Indian mill industry but also the competition of Lancashire which could be countered by an increase of duty on Lancashire goods. Japanese imports of cloth made out of 1-20's counts only amounted to 10% of India's requirements and the mills that actually suffered were those spinning finer counts. He quoted figures to show that Bombay and Ahmedabad took only about 25% of the Oomra crop and imported as much as 4 lakhs bales of foreign cotton. As long as there was some demand in India for finer cloths there was a case for the protection of these mills provided the interests of growers were not seriously threatened. The people of India

could considerably advance the cause of *swadeshi* cloth by giving preference to the cloth made in the country. He, however, expected the mills to do the right thing by the growers who were their best customers, otherwise India should at once enter into an agreement with Japan. On a reliable authority he learnt that the Japanese agents in Central Provinces and Berar had already stopped buying Indian cotton and he appealed to the millowners to realise the ruinous condition to which the growers will be reduced if a market of 15 lakhs of bales of short-stapled cotton was lost. He likewise appealed to the growers not to let the national industry be crippled. Concluding he asked for the appointment of a Sub-Committee of seven members to devise means and explore new markets, increase local consumption and participate in the triangular discussion.

Khan Bahadur Sardar Habibullah urged the necessity of finding a permanent solution of the problem by finding fresh markets as a dangerous situation like the present might arise any time. He criticised the management of the Indian mills which was anything but satisfactory and urged for an amicable settlement with Japan.

Sardar Rao Bahadur Bhimbhai R. Naik was quite sure in his mind that the drop of Rs. 15 to Rs. 20 in the price of cotton was due solely to Japanese boycott. Japan was smarting under special treatment accorded to Lancashire and was retaliating on India. This fact was borne out by the complete cessation of their operations in Indian markets. Indian and Lancashire mills cannot, by any stretch of imagination, absorb 1½ million bales. Already the Indian grower had suffered terribly due to the low prices prevalent during the last two years and if prices declined by Rs. 50 as predicted by certain experts the plight of the grower would be indescribable. The Committee could also do their share by encouraging the growth of medium and long-stapled cotton wherever possible as this cotton would find an easy market, but as this was a matter which could not be soon accomplished, ways and means for immediate relief to the growers were of paramount importance. He appealed to the Government and the millowners to help the growers by granting either subsidies or remission of taxation and by selling cheap cloth. On these grounds he supported the resolution.

Rao Bahadur Deshpande urged the necessity for an immediate remedy as unless it was forthcoming the Co-operative Banks being unable to recover their advances would have to close down. An increase in the production of long-stapled cotton which found a ready market was the need of the hour and he advocated immediate propaganda in Central Provinces and Berar for this purpose.

Rao Bahadur Kothare suggested an amendment in the wording of the resolution substituting "cotton grown in India" in the place of "short stapled cotton" on the grounds that the present wording inferred that growers could obtain better prices for short-stapled cotton which they might therefore continue to grow. He saw no reason why India should not be able to consume all the cloth that could be manufactured from the

entire Indian crop. He urged the necessity of going about the negotiations judiciously so that proposals from a responsible body like the Indian Central Cotton Committee should have their due weight.

Sardar Sampuran Singh said that it was up to the Indian mills who had the advantages of cheap labour and easy access to cotton to put up their house in order so as to successfully compete with both Lancashire and Japan.

Proposed by the *President* and seconded by *Mr. Jenkins* a Special Sub-Committee composed of :—

Sir Purshotamdas Thakurdas (failing him Mr. R. G. Saraiya),

Mr. S. D. Saklatvala,

Seth Kasturbhai Lalbhai,

Sardar Rao Bahadur B. R. Naik,

Rao Bahadur M. G. Deshpande,

Mian Nurullah,

The Director of Agriculture, Bombay,

The Director of Agriculture, Central Provinces,

Mr. J. Venesch,

Mr. H. B. Moore,

Khan Bahadur Sardar Habibullah,

Mr. Y. G. Deshpande,

The President and the Agricultural Expert (in case available),

was formed and agreed to.

Mr. Saklatvala scouted the suggestion of Japan buying large quantities of cotton from Turkey, whose local crop was only about 130,000 to 140,000 bales ; a third of which was required by her own industry and the remainder by Greece but in this event Turkey would again have to fill their requirements by the purchase of an equal quantity of Indian cotton.

The resolution having been put to vote by the *President* was carried and the report of the Technological Research Sub-Committee was adopted.

Another resolution thanking Messrs. Volkart Brothers for the facilities afforded in connection with experiments conducted at the Technological Laboratory on Moisture Tests at Karachi was also passed.

SUBJECT 60—*Report of the Standing Finance Sub-Committee.*

(*a*) Balance Sheet as at March 31st, 1933.

(*b*) Final Accounts—1932-33.

(*c*) Revised Estimates—1933-34.

(*d*) Budget for 1934-35 (Government servants).

The report of the Standing Finance Sub-Committee which included such items as Balance Sheet as at 31st March 1933, Final Accounts—1932-33, Revised Estimates 1933-34 and the Budget for Government servants for 1934-35 was next considered.

The Standing Finance Sub-Committee having delegated certain powers to the Secretary, a representation from the Director, Technological Laboratory, asking for similar delegation of powers to him came up for decision.

The President suggested that the report of the Standing Finance Sub-Committee be adopted and the matter of delegation of power be referred to the Standing Finance Sub-Committee for further consideration.

Mr. Jackson raised a question as to whether a member of the Committee's staff of under five years' service was not eligible to the Committee's contribution towards the Provident Fund, to which the *President* replied that under the wide powers of discretion conferred on the Trustees, deserving cases always received sympathetic consideration.

The President moved the following resolution which was seconded by *Mr. Chunilal B. Mehta* and carried :—

RESOLUTION.—"That the Report of the Standing Finance Sub-Committee be adopted".

"That the Revised Estimates for 1933-34, as now amended, be approved."

"That the Budget for the pay of Government Officers for 1934-35 be approved."

"The the question of delegation of powers raised by the Director, Technological Laboratory, be further considered by the Standing Finance Sub-Committee".

SUBJECT 61—*Statement of expenditure showing Committee's Commitments during the next five years.*

The President called for comments of the statement suggested by Mr. Vonesch to the Standing Finance Sub-Committee.

Mr. Vonesch drew attention to the closing balances given on the last page of the amended statement possibly on the assumption that no further

scheme will be sanctioned and if all the money sanctioned so far were to be spent, the present balance of Rs. 10 lakhs would dwindle down to Rs. 3 lakhs only at the end of 1937-38. He had no intention of asking the Committee to curtail activities in new useful schemes but only sounded a note of warning to those who went on applying for money simply because they knew it was there and was easily obtainable.

The statement was recorded.

SUBJECT 62—*Provincial Cotton Committees—Proceedings of the Punjab Provincial Cotton Committee.*

The Proceedings of the Punjab Provincial Cotton Committee held on 15th May 1933 included proposals for linking up research work on Pink Boll-worm, for the installation of a defibrating machine for experimental work on fuzzy cotton seeds and for investigation into the causes of the periodic partial failure of the American cotton crop in the Punjab. These were considered by the Agricultural Research Sub-Committee, whose views will be found in the report issued separately. Item 6 of the agenda of the above Committee regarding proposals for collecting information of various raw cotton in villages had also been dealt with separately.

SUBJECT 63.—*Half-yearly report of the Publicity and Propaganda Officer.*

The Publicity Officer was congratulated by *Sardar Sampuran Singh* on the valuable work he was doing which was borne out by a constant stream of material appearing in the press. He emphasised the necessity of extending propaganda to Lancashire and other manufacturing countries. These wishes of the Committee members were already forestalled by the Publicity Officer who had regularly supplied all publicity material such as pamphlets, bulletins, folders, posters, articles, communiques etc. etc. to the Indian Cotton Enquiry Committee established at Manchester and to various other Associations, Institutions, Committees and other public bodies abroad. This was confirmed by the *President* who said that in addition to the efforts of the Publicity and Propaganda Officer of the Indian Central Cotton Committee, a Special Committee in England was appointed to supplement our efforts in this direction and was spending English money for the benefit of India.

Referring to the Report under discussion the *Hon. Mr. Vellingiri Gounder* wanted detailed information as to the exact nature of enquiry that had been received by the Publicity Officer from foreign associations, public bodies etc. The *Publicity Officer* furnished the necessary details of enquiries which centred on spinning tests, staple length of Indian cottons, marketing of Verum cotton and various improvements effected in cottons grown in Sind, Punjab and other provinces. Functioning as the Information Bureau of the Indian Central Cotton Committee, the Publicity Department supplied information regarding the clean-up measures undertaken to combat Spotted Boll-worm in Gujerat and other pests and diseases of cotton.

At the suggestion of Mr. Burt, the *Publicity Officer* agreed to include two new items in his future programme, viz., visiting Indian States for the purposes of explaining to ginning and pressing factory owners the reasons for sending in accurate cotton press returns and preparing from the minutes of the full Committee meeting a summary of the discussion in a little less formal manner for the benefit of all chambers of commerce, trade associations, co-operative societies and others.

On the question of rates for advertisement on railway stations raised by Mr. Jackson, *Mr. Burt* said that the railways would be willing to give space for agricultural propaganda advertisements at concession rates.

The President moved that the half-yearly report of the Publicity and Propaganda Officer be approved which was seconded by *Sardar Sampuran Singh* and unanimously carried.

SUBJECT 64—*Meeting of the Indian Central Cotton Committee at Indore.*

The President said this subject had been postponed for consideration at this meeting and though the Indore Darbar had always been very hospitable he thought that in consideration of the large expenditure to the State which was unthinkable in these days of depression the next meeting should be held in Bombay.

This was agreed to.

SUBJECT 65.—*Provincial Cotton Committees—Proceedings of the Sind Cotton Committee.*

The Proceedings of the Sind Cotton Committee were recorded.

SUBJECT 66.—*Privileges of members of the Indian Central Cotton Committee in getting information or help from the Institute of Plant Industry, Indore.*

The President said that Mr. Pandya had raised the following points in his letter of 8th August 1933 and asked Mr. Jackson to answer them. They were—

1. Whether the Institute of Plant Industry is an all-India Institute or is meant only for contributing States of Central India and Rajputana.

2. Whether members of the Indian Central Cotton Committee were privileged to obtain help, advice and information from the Institute of Plant Industry, Indore.

3. Whether provincial departments of agriculture or departments of agriculture in Indian States, who did not contribute directly to its upkeep, particularly those who are members of the Indian Central Cotton Committee, were entitled to information from the Plant Institute.

Mr. Jackson replying said he could not understand why these questions were raised at all. Referring to the last sentence in, the Secretary's note that no complaints of such nature having been refused had been received by the Committee, he thought the Secretary must have overlooked the letter from Mr. Pandya asserting that the requests of two of his staff for information in regard to cotton had been turned down. He had no record of any requests for information from Ujjain but only three requests for material help. His procedure was always to supply all available information on matters concerning cotton improvement work and only to make a discrimination with regard to questions affecting the general agricultural development of the States as per item 2 (*b*) of the Memorandum of Association of the Institute between the contributing and non-contributing members.

Mr. Chunilal B. Mehta asked what Mr. Jackson would do if a member of the Committee representing one of the non-contributing States asked for information.

Mr. Jackson replied that he would treat the request in the same way as one arising out of the Cotton Committee's subjects.

The Hon'ble Mr. Vellingiri Gounder enquired whether in view of the large expenditure of the Committee's money during the past eight years any fundamental research work on cotton which might be applicable to any other part of India had been undertaken and if so whether results of economic importance had been obtained.

Mr. Jackson replied that as explanation would take considerable time he referred the Hon'ble Mr. Vellingiri Gounder to the annual report of the Institute.

SUBJECT 67.—*Crop Forecasts—Scheme for the publication of Cotton Forecasts.*

The Committee next considered the important proposals in the Memorandum of the Director General of Commercial Intelligence and Statistics and recently circulated by the Government of India. The simultaneous publication of cotton forecasts in Bombay and Calcutta and the resumption of their publication in the form of leaflets, which had been discontinued as a measure of economy, was urged by *Mr. Burt*. Any translation necessary should be done by the provinces concerned.

Mr. Chunilal B. Mehta suggested reforms in the present method of preparing forecasts which were anything but satisfactory, but in the meantime he saw no objection to the immediate issue of provincial forecasts quite independently of the All-India Forecasts as these figures would be of assistance to the trade. Referring to items 3 and 5 of the annexure to the Memorandum referred to above which obviously were the cause of the delay he said that figures given by the provincial authorities under 'yield per acre' should be accepted without modification, while item 5 dealing with the preparation of graphs and summary of

the latest position regarding cotton crop in foreign countries from various sources was unimportant and could be deferred.

Mr. Vonesch drew attention to the desirability of postponing the publication of the first and final forecasts by one month to about the 15th September and 15th March respectively with which *Messrs. Chunilal B. Mehta and Ramamurty* concurred.

Mr. Plymen inquired whether (*a*) the final forecasts as published by the Government of India were in the same form as those issued by provincial governments, especially in respect of yield per acre and whether (*b*) the Director General of Commercial Intelligence and Statistics had better source of information to check the authenticity of provincial figures.

Mr. Joshi replying to the speakers who had preceded said that the present dates which were fixed after consultation with the Government of India could not be altered without Government's sanction but that the first two forecasts dealing only with areas could be deferred in consultation with provincial Governments. He was against the publication of provincial forecasts prior to All-India Forecasts as this would militate against the desired secrecy of forecasts. The acre yield figures which were made out in the provinces were carefully scrutinised in Calcutta and by comparing with the figures of the previous years for finding out whether the yield agreed with the condition factor, discrepancies were remedied, in consultation with Directors of Agriculture.

These statements were supported by *Mr. Burt* who testified to the close co-operation between the Director-General of Commercial Intelligence and Statistics and the provincial authorities in the matter of rectifying any discrepancies by mutual agreement. In the case of Indian States, whose returns were found incomplete, such material as was available was used to build up the All-India Forecast.

The next point discussed was the method employed at arriving at the yield per acre.

Mr. Plymen said that the basis of forecasts depended on acreage and yield and while acreage was well known standard outturn was worked and revised every five years. *Annavari* estimate was not always accurately assessed and it was here that errors usually crept in. A possible solution of the difficulty lay in carrying out extensive crop cutting experiments. With this view *Mr. Ramamurty* concurred and thought that the enquiry that was now being made to find out the cost of production of cotton and sugarcane might yield figures which would be helpful for checking the accuracy of standard figures. *Mr. Plymen* continuing said that the 3rd and 4th pickings being largely dependent on weather conditions it was advisable to postpone the date of the publication of the 3rd forecast to the 15th January.

Sardar Rao Bahadur B. R. Naik expressed the view that it was not the *annavari* system which was responsible for errors but rather the slip

shod method employed by Revenue officials who went round to collect the information. As an example of carelessness he gave the case of Surat District where the yield was actually 130,000 bales against an estimate of 90,000 bales. There was no justification for such wide variations and as the question was of vital importance to the agriculturists, the Indian Central Cotton Committee and the Imperial Council of Agricultural Research might finance a scheme which has for its object the improvement of primary sources of information. These opinions were shared by *Mr. Vonesch.*

SUBJECT 71—*Appointment of a permanent representative of the Karachi Indian Merchants' Association on the Committee—Letter from the Government of India.*

The Secretary's note regarding the appointment of a permanent representative of the Karachi Indian Merchants' Association on the Committee instead of the present nominated additional member was recorded.

The President informed the Committee that the Government of India did not consider it necessary to amend the Cotton Cess Act but had no objection to extend the period of nomination for another three years.

Mr. Jenkins accepted the decision but said that the Karachi Indian Merchants' Association would continue to bring this question before the Committee.

SUBJECT 73.—*Proposed construction of buildings for the Director and staff of the Institute of Plant Industry, Indore.*

Opening the discussion *Mr. Jackson* gave a short history of the house accommodation of the Director which was ended with the Holkar Durbar presenting the house to the Government of India. This resulted in his moving to a distant place. The period of one year for which he was permitted to occupy his present quarters had already expired and as there was an acute shortage of suitable housing accommodation at Indore, he applied to the Committee to provide funds for building the necessary quarters. Referring to the Secretary's remarks regarding the inadvisability of sinking capital in bricks and mortar he pointed out that they had a precedent in the cases of the Matunga Laboratory and the existing buildings at Indore and that the present was a splendid time for building operations owing to the cheapness of building materials. The expenditure was justified on account of the good work done by the Institute and that closer supervision would be possible if the Director and the staff were located close to their work. A small outlay of Rs. 31,000 was necessary because of the sum of Rs. 1,15,000 per annum sanctioned by the Committee in 1929 for five years, there was a balance of Rs. 60,000 which had not actually been paid. *Sardar Sampuran Singh* was of opinion that there was still time to approach the Durbar about the Director's house. The Committee naturally hesitated about spending money on buildings for which it might receive no compensation. The Committee's schemes were for 10 years and they could not estimate

their requirements in the future. Under the circumstances he considered that either the State or the Government of India should provide assistance in obtaining the necessary quarters, but not spend large sums on buildings at the moment. In the event of this course proving a failure, the question of compensation might be considered.

Mashir Bahadur Kanungo appealed to the Committee not to embarass the Indore Durbar who were in a difficult position owing to existing financial conditions and the acute shortage of housing accommodation at Indore.

Mr. Ramamurty wanted information regarding the future commitments of the Indian Central Cotton Committee, Indore State and the contributing States in relation to the Institute.

Mr. Jackson gave the information desired *viz.*, Rs. 50,000 by Central India and Rajputana States during the present year, Rs. 110,000 by the Indian Central Cotton Committee and Rs. 10,000, a grant of 300 acres of land free of rent and other sundry services by the Indore Durbar. The other States contributed in proportion to their annual income. In reply to *Mr. Ramamurty's* question *Mr. Jackson* said that in spite of the present financial stringency no States had resigned their membership.

In view of the fact that in the past the States had only contributed 2 lakhs against 12 lakhs by the Committee, *Mr. Ramamurty* doubted whether the States would continue their contributions and therefore was averse to the investment of Rs. 1 lakh. The work of the Committee during the last 5 years had grown from a provincial to an all India nature which necessitated altered methods of work and research organization.

Mr. Jenkins compared the present case with that of the Sukkur Barrage where economy and efficient working were effected by providing suitable houses for the officers and staff employed on the work.

Mr. Ramamurty agreed that Mr. Jackson required a house and asked who besides the Committee should contribute towards the expenditure.

Mr. Saklatvala was not in favour of sinking money in buildings which could be better utilized in the schemes. He suggested that an appeal should be made to the Holkar State to build houses for their officers including the Director in return for a suitable rent.

Mashir Bahadur Kanungo regretted that it was impossible for the Durbar to provide a house for the Director.

Mr. Y. G. Deshpande was also in favour of another appeal to the Durbar and if their request was refused to consider the advisability of transferring the Institute to British India.

Mr. Burt explained that the two functions of the Institute were the programme of fundamental research on cotton applicable to all India and especially to the great black soil area, and general agricultural research

and propaganda for the benefit of the Indian States of Central India and Rajputana which contributed Rs. 50,000 annually for their side of the work. If the States withdrew owing to retrenchment the Committee will still have to continue on the lines laid down. The Committee was secure in the possession of a 99 year lease on the land from the Indore Durbar and also certain other facilities which were a permanent gift from the Durbar to cotton research in Central India. There appeared to be a feeling that the Committee were being generous but actually it had paid Rs. 60,000 less than its promised contribution of Rs. 5,75,000 and if the Institute insisted the Committee would have to pay this amount. He suggested it leaving to the discretion of the Board of Governors on which the Committee was strongly represented to use the money in the best interests of the Institute.

Khan Bahadur Sardar Habibullah preferred that the matter of the Indore Institute be further considered by the Standing Finance Sub-Committee. Judging from the present attitude there was no guarantee that the Institute would get fair treatment. Generally speaking he was against creating a precedent by investing money in buildings.

Mr. Chunilal B. Mehta joined Khan Bahadur Sardar Habibullah in asking the matter to be referred to the Standing Finance Sub-Committee.

The Honourable Mr. Vellingiri Gounder pointing out the usefulness of the Institute to all Central India States appealed to the contributing States whether they did not consider it a necessity to house their Director. As the Committee had to look after the interests of all institutes engaged in cotton work in India it could hardly be expected to contribute more than its proportionate share for this Institute. He, therefore, appealed to the Durbar for a contribution.

Mr. Jackson questioned the correctness of figures under Subject 66 and emphasised the mutual benefits derived from interdependence by the Committee and Indian States. The programme at the Institute was of great importance to a very large cotton growing part of the country even without carrying out variety trials of Cambodia for Madras. The Committee's contribution meant a great deal to cotton growers of Central India and Rajputana. With the services of a specialist officer the Institute could henceforward be expected to do definitely good work. He deprecated the notion of Holkar Durbar being ungenerous.

Replying to Mr. Saklatvala he added that principles occasionally had to be altered to suit circumstances. He instanced a precedent in the case of the Matunga Laboratory which belonged to the Indian Central Cotton Committee and which had provided a house for the Director. The case of the Central India and Rajputana States which were a collection of small units was different to that of Provinces which were an entity and it would appear unreasonable to expect from them the provision of the necessary money. He disagreed with Mr. Deshpande and thought the situation of the Institute was unique. As the Standing Finance Sub-

Committee had referred the matter to them, where was the sense of referring back the matter to the Standing Finance Sub-Committee? There was no question of paying rent to the Indore Durbar who were famous for their hospitality.

On the suggestion of *Mr. Burt* the matter was referred back to the Standing Finance Sub-Committee.

SUBJECT 74.—*Merging of the grants made by the Indian Central Cotton Committee in Provincial Revenues and the connected question of the position of employees of Provincial Governments paid from grants made to the latter by the Indian Central Cotton Committee and of the re-employment of ex-research students and ex-servants of the Committee—Report of the Special Sub-Committee.*

The President informed the Committee that as a result of the recommendation made by the Special Sub-Committee the Committee would in future have full control over their finance and staff. The proposal that the Report of the Special Sub-Committee be adopted was moved by the *President,* seconded by *Mr. Burt* and carried.

The President thanked the members for the patience and care which they displayed in dealing with many important subjects and for the very satisfactory conclusions arrived at.

Mr. Saklatvala proposed a vote of thanks to the President for the excellent way in which the deliberations of the Committee had been conducted.

The next meeting of the Indian Central Cotton Committee will be held at Bombay on the 29th January 1934.

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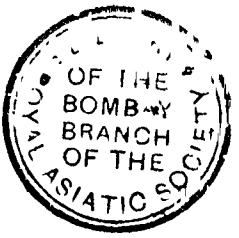


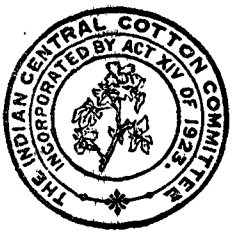
Summary Proceedings

of the

Twenty-eighth Meeting of the Indian Central Cotton Committee, Bombay,

held on the

29th and 30th January 1934



Indian Central Cotton Committee.

With the Secretary's Compliments.

Vulcan House, Nicol Road,
Ballard Estate,
Fort, Bombay.

INDIAN CENTRAL COTTON COMMITTEE.

28TH MEETING—29TH AND 30TH JANUARY 1934.

(Held at Vulcan House, Ballard Estate, Fort, Bombay.)

SUMMARY PROCEEDINGS.

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At the 28th meeting of the Indian Central Cotton Committee held on the 29th and 30th January 1934, at Vulcan House, Nicol Road, Fort, Bombay, under the chairmanship of Dewan Bahadur Sir T. Vijayaraghavacharya, important subjects came up for discussion including issues of immediate interest to the cotton trade, like the greater use of Indian cotton in the United Kingdom, Cotton Policy in Surat, the Trade Agreement with Japan, Reduction of Railway Freight on Cotton, which were threshed out at great length.

His Excellency the Governor of Bombay honoured the meeting with his presence.

After the Presidential Address and a speech by His Excellency the Governor, who sat through the proceedings for full two hours, the meeting settled down to the normal routine of business on the agenda, beginning with the Confirmation of Minutes, Retirement of members by rotation, Appointment of Vice-President and Sub-Committees, and Appointment of members on the Board of the East India Cotton Association.

Before the meeting proceeded with consideration of the Agenda, a vote of thanks to His Excellency the Governor was unanimously passed and the President thereafter read out a message from the Honourable Khan Bahadur Mian Sir Fazl-i-Husain, K.C.S.I., K.C.I.E., Kt., Member-in-charge of Education, Health and Lands Department, Government of India.

The following members were present at the meeting :—

His Excellency the Right-Honourable Michael Herbert Rudolf Knatchbull, Lord Brabourne, G.C.I.E., M.C., Governor of Bombay,

Dewan Bahadur Sir T. Vijayaraghavacharya, K.B.E. (*President*), Vice-Chairman, Imperial Council of Agricultural Research,

Sir Purshotamdas Thakurdas, Kt., C.I.E., M.B.E., (*Vice-President*), Representative of the East India Cotton Association, Bombay,

B. C. Burt, Esq., C.I.E., M.B.E., I.A.S., Agricultural Expert, Imperial Council of Agricultural Research, (*ex-officio*),

Dr. W. Burns, I.A.S., Director of Agriculture, Representative of the Agricultural Department, Bombay Presidency,

P. B. Richards, Esq., I.A.S., Entomologist to Government, Representative of the Agricultural Department, United Provinces,

H. R. Stewart, Esq., I.A.S., Director of Agriculture, Representative of the Agricultural Department, Punjab,

J. H. Ritchie, Esq., I.A.S., Director of Agriculture, Representative of the Agricultural Department, Central Provinces,

S. D. Saklatvala, Esq., Representative of the Bombay Millowners' Association,

H. B. Moore, Esq., Representative of the Bombay Chamber of Commerce,

Chunilal B. Mehta, Esq., Representative of the Indian Merchants' Chamber, Bombay,

J. O. G. Barnes, Esq., Representative of the Karachi Chamber of Commerce,

Seth Naranlal Jivanlal, Representative of the Ahmedabad Millowners' Association,

J. Vonesch, Esq., Representative of the Tuticorin Chamber of Commerce,

E. J. W. Plummer, Esq., Representative of the Upper India Chamber of Commerce,

W. Roberts, Esq., Representative of the Empire Cotton Growing Corporation,

Y. G. Deshpande, Esq., Commercial Representative, Central Provinces,

Rao Bahadur G. R. Kothare, M.L.C., Commercial Representative, Central Provinces,

Khan Bahadur Sardar Habibullah, M.L.C., Commercial Representative, Punjab,

Rao Bahadur M. G. Deshpande, C.B.E., Co-operative Banking Representative,

The Honourable Mr. V. C. Vellingiri Gounder, Representative of cotton growers, Madras,

M. R. Ry. K. Sarabha Reddi Garu, M.L.C., Representative of cotton growers, Madras,

Sardar Rao Bahadur Bhimbhai Ranchodji Naik, M.L.C., Representative of cotton growers, Bombay Presidency,

Rao Bahadur C. S. Shirahatti, Representative of cotton growers, Bombay Presidency,

Rai Bahadur Lala Anand Sarup, M.L.C., Representative of cotton growers, United Provinces,

Sardar Sampuran Singh, M.L.C., Representative of cotton growers, Punjab,

Mian Nurullah, M.L.C., Representative of cotton growers, Punjab,

N. M. Deshmukh, Esq., Representative of cotton growers, Central Provinces and Berar,

J. B. Deshmukh, Esq., Representative of cotton growers, Central Provinces and Berar,

C. V. Sane, Esq., Director of Agriculture, Representative of the Baroda State,

H. H. Pandya, Esq., Agricultural Adviser, Representative of the Gwalior State,

F. K. Jackson, Esq., Director, Institute of Plant Industry, Indore, Representative of Rajputana and Central India States,

D. N. Mahta, Esq., Economic Botanist for Cotton, Central Provinces,

M. R. Ry. V. Ramanatha Ayyar, Avl., Cotton Specialist, Coimbatore,

Mashir Bahadur S. V. Kanungo, Customs Commissioner, Representative of the Indore State,

W. J. Jenkins, Esq., I.A.S., Chief Agricultural Officer in Sind,

Rai Saheb Thakur Ram Prasad Singh, Economic Botanist to Government (Cotton), United Provinces, Cawnpore,

Khan Bahadur Nawab Fazl-i-Ali Khan, Chairman, District Board, and President, Central Co-operative Bank Ltd., Gujrat (Punjab),

The Secretary, (P. H. Rama Reddi, Esq., I.A.S.),

The Director, Technological Laboratory (Dr. Nazir Ahmad), and

The Publicity Officer (R. D. Mihra, Esq.).

By invitation.

Sir Richard H. Jackson, Chairman, Indian Cotton Enquiry Committee, Manchester.

The Hon'ble Dewan Bahadur S. T. Kambli, J.P., Minister for Agriculture, Government of Bombay.

The Hon'ble Khan Bahadur D. B. Cooper, J.P., Minister for Local Self-Government, Government of Bombay.

Sir Joseph A. Kay, Kt., C/o Messrs. W. H. Brady & Co., Bombay.

Major W. Ellis Jones, M.L.C., C/o Messrs. Drennan & Co., Bombay.

Sir Munmohandas Ramji, Kt.
T. V. Baddeley, Esq.
H. H. Lakin, Esq.
Madhavji D. Thackersey, Esq.
} Representatives of the Bombay Mill-owners' Association.

Seth Kasturbhai Lalbhai, Pankore's Naka, Ahmedabad.

W. D. M. Clarke, Esq., His Majesty's Trade Commissioner at Bombay.

Balubhai Kalidas Patel, Esq., Chairman, Sonsek Co-operative Cotton Sale Society, Sonsek.

Rao Bahadur D. Ananda Rao Garu, Officiating Director of Agriculture, Madras Presidency.

G. B. Phanse, Esq., Deputy Director of Statistics, Calcutta.

J. B. Hutchinson, Esq., Geneticist and Botanist, Institute of Plant Industry, Indore.

Nizam-ud-din Hyder, Esq., Director of Agriculture, His Exalted Highness the Nizam's Government, Hyderabad (Deccan).

Rai Sahib Kalidas Sawhney, Cotton Research Botanist, Parbhani.

Mohammad Afzal, Esq., Cotton Research Botanist, Lyallpur.

G. P. Pathak, Esq., Acting Deputy Director of Agriculture, Gujerat, Surat.

M. L. Patel, Esq., Cotton Breeder, Gujerat, Surat.

Makanji Kahanji Patel, Esq., Supervisor, Gujerat Co-operative Cotton Sale Societies' Union, Sonsek.

Addressing the meeting the President said:—

" Your Excellency and Gentlemen,

It is my privilege to extend to Your Excellency on behalf of the Indian Central Cotton Committee a very cordial welcome to this its 28th meeting

and to express our sincere appreciation of this clear proof of Your Excellency's interest in our work. It is a matter of satisfaction to us that you have done us this honour within two months of your arrival in India and that at a time when you have other more engrossing preoccupations. Nearly one-third of the total cotton produced in India comes from the Bombay Presidency and the Indian States situated within its borders. A third of the ginning and pressing factories and about two-thirds of the total number of spinning mills in India are situated in this province; also about two-thirds of the Indian cotton crop is marketed in the only two well-organised cotton markets of India, viz., Bombay and Karachi, which are also in this Presidency. Bombay is thus rightly entitled to be ranked as the premier cotton province of India. The prosperity of the Presidency over which you, Sir, have the privilege of presiding is bound up with the prosperity of cotton in all its phases, agricultural, industrial and commercial. Consequently our connexion with the Government of Bombay is very close and we are happy in the thought that our relations with successive heads of the Government have always been of a most harmonious character.

2. On behalf of the Committee, I also desire to extend to Sir Richard Jackson a warm welcome to India, and to this meeting of the Indian Central Cotton Committee. As the Chairman of the Council of the Empire Cotton Growing Corporation, as a distinguished representative of the British Cotton Growing Association, and the Chairman of the Indian Cotton Inquiry Committee set up in England, Sir Richard not only occupies a prominent position in the cotton world, but one of interest and importance to India. The direct object of his visit is to extend and develop the use of Indian cottons in England, an object in the furtherance of which our Committee has co-operated with his Committee from the time His Majesty's Government in the United Kingdom established the Committee of Inquiry in pursuance of the Ottawa Agreement. I trust that his visit will stimulate the endeavours that are being made to popularise Indian cotton in Lancashire and remove whatever impediments there may be to its further and fuller utilisation. Sir Richard realises, nobody better, what a wide scope there is for the extended use of our cotton in England. In the last few days I have had the privilege of arranging for him a programme of visits to the main cotton tracts of India which will give him an opportunity of studying problems on the spot and seeing something of the research work which the Indian Central Cotton Committee has been carrying on. I trust that when his travels in India have come to a close, he will feel that these inspections have not been devoid of interest and value, and that they may be fruitful of practical results. I warmly hope, and in this I know I have all the other members of this Committee with me, that Sir Richard Jackson's visit to India following so closely on that of the Lancashire industrial delegation will mark the beginning of a new era in the relations between India and Lancashire, that the period of mistrust and misconception is over, and that a period of mutual understanding and friendly co-operation will be established.

3. I may be forgiven if on this occasion I venture to make a reference to ourselves. Business acumen, an aptitude for scientific research and an ability to apply its results to practical uses, and a first-hand knowledge of agriculture drawn from all over India have been brought together on this Committee to tackle the various problems confronting the cotton industry of India. Every phase of the industry is represented on the Committee and to the divergence of our individual outlook but the unity of our common aim must be attributed the wide acceptability of the measures introduced by us. I say this all the more readily as I am conscious of how little I have contributed to the work of this Committee and how much India owes to the members who have so freely and ungrudgingly given of their time, energies and talents to the body of which we are all so proud. A large portion of the detailed work of the Committee is done in Sub-Committees and I shall be failing in my duty if I did not take this occasion of acknowledging the neverfailing assistance rendered so cheerfully by members who must have been drawn away from their own concerns to attend to dry, unremunerative tasks.

4. The half-year that has just closed has been memorable as it witnessed the settlement of a subject that was gravely agitating members' minds on the occasion of our last meeting. While we gratefully acknowledge the services of the Indian Delegates, it will be a source of pride and satisfaction to the Indian Central Cotton Committee that its representatives materially contributed to the knowledge, skill and wisdom which have solved the many thorny questions that stood in the way of a friendly settlement of the differences about cotton between India and Japan. Our representatives faithfully carried out the mandate given to them, that as far as possible they should bear in mind the identity of the interests of the cotton grower and the cotton manufacturer, but where there were inevitable differences the interests of the grower should prevail.

5. I must now refer to the changes in the personnel of the Committee since we last met. Death has robbed us of one of our members, Rai Bahadur Rao Bikram Sinha who joined the Committee in 1926 as the representative of the cotton growing industry in the United Provinces. Mr. Sinha was noted for the interest he took in the agricultural problems of his province and we deeply regret his untimely death. Mr. J. H. Ritchie, our late Secretary, has taken the place of Mr. F. J. Plymen as the representative of the Agricultural Department in the Central Provinces, and we are glad to see him in our midst again. We shall miss Mr. Plymen, his power of expression and his skill and ability in debate. I am sure you wish me to express to him on your behalf our wishes for a happy retirement. I desire to extend a cordial welcome to Mr. J. Nuttall, who has been appointed as the representative of the cotton ginning and cotton manufacturing industry in the Madras Presidency in the place of Mr. Robert Lee resigned, to Khan Bahadur Nawab Fazl-i-Ali Khan who has been appointed an additional member by the Governor-General in Council in the place of Mr. Mohammad Azhar Ali retired, and to Rai Bahadur Lala Anand Sarup, who replaces the late Rai Bahadur Rao

Bikram Sinha as the representative of the cotton growing industry in the United Provinces.

6. I shall not detain you by referring to matters of importance on the Agenda. As usual, your detailed work has been facilitated by the preparatory work done on the Sub-Committees and I know you would like to proceed to deal with them. Your Excellency and Gentlemen, I thank you for the patience with which you have heard me."

His Excellency the Governor addressed the meeting as follows :—

" Sir Vijayaraghavacharya and Gentlemen,

Since I received your kind invitation to preside at one of the meetings of your Committee, I have been looking into its history and I find that you were constituted in 1921 as a result of the recommendations contained in the report of the Indian Cotton Committee of 1919 and were given definite legal status by the Indian Cotton Cess Act of 1923. You can therefore look back upon a period of 13 years of life—long enough, in these days of hustle, for you to claim to be an old established institution, especially when the claim is backed, as it is in your case, by a continuous tradition of useful work accomplished. For anyone who wishes to see for himself how useful your work has been I would recommend a comparison of present conditions with those recorded in the report of the Indian Cotton Committee of 1919 to show what progress has been achieved in the Cotton trade and industry largely by the efforts of your Committee. I esteem it a privilege therefore, Gentlemen, to be invited to attend one of your meetings. I am very grateful to you, Sir, for your invitation which I have accepted with the greatest pleasure.

You are lucky, particularly in these days of financial difficulty all round, to be able to command an assured income derived from a cess on the industry itself. Power, however, they say involves responsibility, and financial power as much as any other. I think you can fairly claim to have adequately discharged this responsibility, and I note with particular interest that you have been generous in the subsidies you have given to research throughout India on all matters connected with cotton. Bombay, which prides itself on being the premier cotton centre in India, naturally expects to have her share of your favours, and her claim has been met by the provision at Matunga of a Technological Laboratory which is investigating many of the problems connected with the spinning qualities of cotton. When I consider the amount of high-grade research work which is being done all over the world on the qualities of one vegetable hair, I am amazed as much at the extent of the subject as at the talent which has been devoted to it.

We hear much nowadays about propaganda. Recently I am interested to see that there has been some criticism of its evil effects as well as insistence upon the necessity thereof. Whatever our opinion on this question may be, there seems no doubt that no institution can thrive which does not pay some attention to publicity. I see that you have not neglected this aspect and that you have recently started a publicity branch. In its publications describing the aims and work of your

Committee, your doings in all directions are fully explained, and I need not delay you by going into them beyond recommending a perusal of those publications to all those who are in any way interested in any of the many branches of the Cotton Industry.

The importance of cotton in both the internal and external economics of India can hardly be over-estimated, and we in this Presidency are perhaps even more keenly interested than any other part of India. It is one of the money crops which gives the grower the means to buy his necessities and pay his taxes, and it is an important item in the trade between India and other countries. The international side has come prominently to the fore recently, and we have had the satisfaction of seeing one important cotton question, namely, that with Japan, brought to a satisfactory conclusion by negotiation. Discussions with cotton interests in Lancashire are at a stage when fruitful results may be expected. What particularly impresses me about the recent negotiations with Japan and Lancashire has been not so much the actual results achieved, though these in themselves are of paramount importance, as the fact that a new spirit appears to have been infused into the negotiations that have been carried on. I am afraid the relations between India and Lancashire have, to some extent, been embittered by the history of the question in the past and the fact that it has been made a political question rather than an economic and commercial one, as it should be. I think that many people, both in India and Lancashire, have now come to realise how very useful India and Lancashire can be to each other if they work together in a spirit of co-operation. I am sure Sir Richard Jackson, whom I am particularly glad to see here to-day, will bear me out when I say that Lancashire has now realised how much she stands to gain in improving her commercial position if she does everything in her power to extend her purchases of Indian cotton. In spite of the great extension that has recently taken place in the Indian textile industry, there are still large sections of the trade in which India and Lancashire do not compete with each other. The possibilities of co-operation must therefore be wide, and I am very glad indeed to see that a more friendly spirit is now prevailing and that the negotiations that have recently taken place hold out the brightest hopes of extensive mutual advantage resulting therefrom. I believe that the day has come when the Political and Industrial leaders of all countries must co-operate if headway is to be made, and it is my earnest hope that co-operation of this sort may lead to an ever-increasing realisation of the fact that Lancashire and India can, if working together, go far towards cementing a permanent and perfectly natural trade friendship.

India, on account of its size and its many varieties of soil and climate, has a correspondingly great range of varying types of cotton, and hence, not only are the problems presented by the cotton industry in India many and diverse, but these varying types of cotton offer a corresponding variety of material which brings into the market different types of buyers. One of the most recent developments likely to affect cotton is the opening of vast areas in Sind for the growing of irrigated cotton under the Lloyd

Barrage. Here, again, I would suggest that much can be done by Governments and Industrialists working hand in hand to ensure a big increase in the production of the right kind of cotton. The potentialities of Sind as a producer of long staple cotton are immense and should be taken into account in any estimate of cotton developments in India and in the world generally. Cotton, like many other products, has been severely affected by the slump which started in 1929, and the great fall in the prices of cotton has hit very hard all those connected with the industry, and not least the primary producer. That primary producer, namely, the agriculturist, who is the least organised and yet most important of all those in the cotton industry, deserves the greatest possible consideration from anybody which has to do with that industry. I am glad that on your Committee agricultural interests are represented, and I have no doubt that the representatives of other interests have also at heart the welfare of the grower himself. It may be, however, that others are not always so solicitous for his welfare, and anything that you can do by marketing, organisation, legislation or any other means to increase his income and therewith the general welfare of the country is work worth doing. In a recent international survey of world agriculture, the writers dealing with India make the following remark :—

> 'The main Wealth of India must lie in agriculture, and the very meagre standard of living throughout the country can only be raised by steady improvement in the produce itself and in the methods of placing it on the world market.'

These duties you are most helpfully performing. I regard your work, however, not only as important from the point of view of cotton, but as something more than this, namely, a hopeful model of human action, the disinterested pooling of many brains for technically and socially desirable ends. I have been told of the time given up by hard-pressed business men to work on this Committee and its many Sub-Committees, and I have been informed of the manner in which the essentials of problems are grasped and analysed and plans of action developed. I feel sure that a body which has this type of service at its command cannot but go on from one stage of usefulness to another, and must set an example of a form of co-operative and planned endeavour which is an essential of progress in the present age ; an example which will, I hope, be followed, in due course, by the leaders of other important industries in India ".

Proposing a vote of thanks to His Excellency the Governor, *the Vice-President* expressed his pleasure at having His Excellency the Governor at the meeting of the Committee and for giving two hours of his precious time to listening to discussions on the subjects. Many Governors had honoured their meetings with their presence but their usual practice was to retire when the formal part of the proceedings was over. This time they had the support of His Excellency in their proceedings and he would assure His Excellency that if he could spare the time to listen to discussions at some meetings on matters more domestic than international he would be able to realize the difficulty they were up against at times from the various provincial Governments. It was peculiarly fitting that

the very first formal visit from the Governor to any department should be in connection with cotton and he felt that the Committee would be very grateful if every time they met in sessions His Excellency would repeat the honour he had done them to-day.

He formally moved :—

RESOLUTION—"That the best thanks of the Committee be voted to His Excellency the Governor for the honour he had done in visiting us this morning."

His Excellency replying expressed his appreciation of the kind words of the Vice-President and wished he had more time to listen to their discussions. However he would follow the Committee's deliberations with the greatest interest and care in the press. He was sure that Sir Richard Jackson would get valuable assistance from the Committee and that he had enjoyed the cordial reception he had received from the Committee. He thought that Sir Richard Jackson was only there to-day to clear any little misunderstanding there might have been and that he would return to Bombay from his tour of the country with the firm conviction that there was hope for India and Lancashire and that they should get down to a real business understanding in the future. Sentiment was a great thing but business was the bedrock on which sentiment had to be built.

The President said that the Honourable Khan Bahadur Mian Sir Fazl-i-Husain had asked him to read the following message to the Committee on his behalf :—

"It has been my pleasant duty to express the cordial appreciation of the Government of India of the excellent work which the Indian Central Cotton Committee has been doing. May I, with your permission, trespass upon your time for a few moments not merely to assure you of my warm interest in your proceedings, but to appraise you of the very great responsibility which is yours in dealing with the question of the larger utilisation of Indian cotton. India has been in the grip of intense agricultural depression for the last two or three years, but cotton has had this advantage over many other commodities that there is an assured market for a considerable portion of the Indian cotton crop in the immediate future. But looking ahead, our efforts no doubt will be directed along two distinct lines—firstly to broaden the basis of demand for Indian cottons and to assure our position in as many markets as possible, and secondly to secure a better balance in the production of different types of Indian cotton. The market for Indian cotton amongst Indian mills requires closer study. While cotton growers should give constant attention to the development of those types of cotton of which the supply is at present inadequate or uncertain, it is expected that Indian mills as a class will show enterprise in seeking for Indian cotton to meet their needs and in improving their methods for the utilisation of indigenous cotton. In fact in such areas as Sind—where a rapid extension in the area under cultivation

is taking place under favourable conditions of irrigation and where the development of the most suitable types is of outstanding importance—Indian cotton millowners should follow the example of millowners in other parts of the world and do something definite for the production of the best types of cotton. The reports of the Sind Agricultural Department show that some long staple types capable of replacing imported African and American cotton have shown considerable promise and that there may even be scope for the production of Egyptian cotton of good quality at any rate on a limited scale where conditions are particularly suitable. The Agricultural Department cannot recommend average zamindars and cultivators to take up a new cotton the behaviour of which is in any way uncertain, for the small agriculturist cannot afford experiments. But when results have been obtained on a research station indicating that certain long staple types are really promising, it would surely be practicable for their extended experimental cultivation to be arranged for by an association or a syndicate of millowners who would benefit directly from a supply of such high class cotton.

It is not sufficient to improve the quality of our cottons but it is necessary to secure better organisation of cotton marketing. I recognise that the marketing of cotton in India is probably more highly organised than that of any other staple commodity and I know that the Indian Central Cotton Committee has led the way in attempts to improve the marketing of Indian agricultural produce. My object in mentioning cotton marketing at the present moment is to assure the Committee of my support in any practical measures which they may undertake and to emphasise the opportuneness of the present time for a special effort in this direction. You will be glad to know that the Imperial Council of Agricultural Research, a body with which you have close and happy relations, hopes shortly to have a specialist in the organisation of the marketing of agricultural produce on its staff. I have no doubt that the Committee's experience will be of great assistance to him and I hope that in return he will be able to be of assistance to the Committee in its further efforts to improve the marketing of Indian cotton.

Your work is of the highest importance to your country—agriculture and industry meet in you. All countries are striving hard to get on, no country can afford to be content with its present position. Unless you are advancing you are bound to be left behind, and this is my excuse for trespassing upon your courtesy to deliver this message to you."

SUBJECT 2.—*Confirmation of Minutes.*

The Minutes of the previous meeting were confirmed.

SUBJECT 3—*Retirement of members by Rotation.*

The Secretary's note was recorded.

SUBJECT 4.—*Appointment of Vice-President and Sub-Committees.*

Mr. Saklatvala said he had very great pleasure in proposing :—

RESOLUTION—"That Sir Purshotamdas Thakurdas be re-appointed Vice-President for the year 1934-35."

In proposing the re-appointment of Sir Purshotamdas Thakurdas as Vice-President for 1934-35, *Mr. Saklatvala* expressed his appreciation of the services which Sir Purshotamdas Thakurdas had rendered both to the country and to the Committee. The guidance of Sir Purshotamdas to the various Sub-Committees had been valuable. This Committee was to be congratulated on getting him for another year. He trusted the Committee would carry his proposal with acclamation.

Rao Bahadur M. G. Deshpande seconded the resolution.

The Vice-President said that when he came to the meeting he was somewhat surprised by the President insisting upon naming him for the Vice-Presidentship for the coming year. In view of his recent illness, during which he often worked in his bedroom, he expected to be relieved of a further year of burden. He greatly appreciated the further mark of confidence in him, but wanted to make it clear that should his physical health fail, he would have to depend upon some other member of the Committee to carry on, with himself only as the nominal figurehead.

The resolution was carried with acclamation.

STANDING FINANCE SUB-COMMITTEE.

The President moved :—

RESOLUTION—"That the following members be appointed to form the Standing Finance Sub-Committee for the financial year 1934-35 :—

Sir Purshotamdas Thakurdas,

Dewan Bahadur Sir T. Vijayaraghavacharya (ex-officio),

Mr. S. D. Saklatvala,

Sardar Rao Bahadur Bhimbhai Ranchodji Naik,

Mr. J. Vonesch,

Rao Bahadur G. R. Kothare,

Mr. J. O. G. Barnes,

Mr. Chunilal B. Mehta and

Mr. H. B. Moore."

Khan Bahadur Sardar Habibullah in seconding the resolution suggested that in view of the fact that the whole of the Committee's detailed work was done in the Sub-Committees, therefore a large range of members

should be considered while appointing members to these Sub-Committees as being of more assistance than appointing the same members on the various Sub-Committees.

The Vice-President explained that the policy hitherto had been to have a large range, but the difficulty had been that the Committee wanted members to be as near Bombay as possible. All these points had therefore been considered.

The resolution was carried unanimously.

The President moved :—

RESOLUTION—"That the following members be appointed to form the Cotton Ginning and Pressing Factories Sub-Committee :—

The Vice-President,

Mr. J. Vonesch,

Mr. J. O. G. Barnes,

Mr. Chunilal B. Mehta,

Mr. G. B. Kotak,

Mr. J. Nuttall,

Mr. W. Roberts,

Mr. E. J. W. Plummer,

Mr. Y. G. Deshpande,

Mr. H. B. Moore,

Rao Bahadur M. G. Deshpande and

Lala Shri Ram (Co-opted member)."

The Vice-President seconded the resolution which was carried unanimously.

The President moved :—

RESOLUTION—"That the following members be appointed to compose the Local Sub-Committee :—

Sir Purshotamdas Thakurdas,

Dewan Bahadur Sir T. Vijayaraghavacharya,

Mr. S. D. Saklatvala,

Sardar Rao Bahadur Bhimbhai Ranchodji Naik,

Mr. J. Vonesch,

Mr. H. B. Moore,

Mr. Girdharlal B. Kotak,

Mr. J. O. G. Barnes,

Mr. Chunilal B. Mehta and

Mr. C. V. Sane."

Mr. W. J. Jenkins seconded the resolution which was carried.

The President moved the following resolution :—

RESOLUTION—"That the following members be appointed to form the Agricultural Research Sub-Committee :—

I. **The President—Dewan Bahadur Sir T. Vijayaraghavacharya (ex-officio),**

II. **The Vice-President—Sir Purshotamdas Thakurdas (ex-officio),**

III. **The Director, Institute of Plant Industry, Indore — Mr. F. K. Jackson (ex-officio),**

IV. **Co-operative Representative—Rao Bahadur M. G. Deshpande (ex-officio),**

V. **Cotton Growers' Representative—Mr. W. Roberts,**

VI. **Cotton Trade Representative—Mr. H. B. Moore,**

VII. **Four Agricultural Officers—**

Dr. W. Burns,
Mr. J. H. Ritchie,
Mr. H. R. Stewart,
Mr. V. Ramanatha Iyer,

VIII. **Additional Members—**

Mr. B. C. Burt,
Dr. L. C. Coleman,
Mr. D. N. Mahta,
Rai Saheb Thakur Ram Prasad Singh,
Mr. H. H. Pandya,
Mr. W. J. Jenkins,
Mr. P. B. Richards,
Mr. S. V. Ramamurty,
Mr. C. V. Sane,
Mr. Chunilal B. Mehta,

IX. **Co-opted members—Cotton Research Botanist, Lyallpur and Cotton Research Botanist, Parbhani and**

X. **The Secretary."**

This was seconded by *Mr. Ritchie* and carried unanimously.

The President moved the following resolution :—

RESOLUTION—"That the following members form the Technological Research Sub-Committee :—

The President (ex-officio),

The Vice-President (ex-officio),

Mr. S. D. Saklatvala,

Mr. B. C. Burt,

Mr. H. R. Stewart,

Dr. W. Burns,

Mr. Chunilal B. Mehta,

Mr. Y. G. Deshpande,

Seth Naranlal Jivanlal,

Mr. S. V. Ramamurty,

Mr. H. B. Moore,

Lala Shri Ram,

Mr. E. J. W. Plummer and

Dr. Nazir Ahmad,

The Bombay Millowners' Association, The Ahmedabad Millowners' Association and The East India Cotton Association will be asked to nominate two representatives each."

The Vice-President seconded the resolution which was carried.

The President moved the following resolution :—

RESOLUTION—"That the Research Students Selection Sub-Committee be composed of the following members :—

The President,

The Vice-President,

Mr. B. C. Burt,

Dr. W. Burns,

Mr. P. B. Richards,

Mr. H. R. Stewart,

Mr. J. H. Ritchie,

Mr. S. V. Ramamurty,

Dr. L. C. Coleman,

Mr. H. H. Pandya,

Mr. W. J. Jenkins,

Mr. F. K. Jackson,

Mr. C. V. Sane,

Dr. Nazir Ahmad."

Mr. Vonesch seconded the resolution which was carried.

The President moved :—

RESOLUTION—"That the Sub-Committee on Malpractices consists of the following members :—

The Vice-President,

Mr. H. B. Moore,

Seth Naranlal Jivanlal,

Mr. J. O. G. Barnes,

Mr. Chunilal B. Mehta,

Dr. W. Burns,

Sardar Sampuran Singh

with power to co-opt."

Mian Nurullah seconded the resolution which was carried.

The President moved the following resolution :—

RESOLUTION—"That the Cotton Forecast Improvement Sub-Committee be composed of the following :—

The President,

The Director General of Commercial Intelligence and Statistics,

The Director of Agriculture, Bombay Presidency,

The Director of Agriculture, Punjab,

The Director of Agriculture, Madras,

The Director of Agriculture, United Provinces,

The Director of Agriculture, Baroda,

The Director General of Commerce and Industry, H. E. H. the Nizam's Government, Hyderabad and

The Director of Land Records, Central Provinces and Berar."

Mr. Saklatvala seconded the resolution which was carried.

SUBJECT 5.—*Appointment of members on Board of East India Cotton Association.*

The President explained that until a formal amendment of the Articles of Association had been made, the Indian Central Cotton Committee had to elect two out of the three gentlemen appointed. He suggested that nominations should be made in the order of votes secured by the members during their election at the last meeting of the Committee.

This was agreed to, and Mian Nurullah and Mr. N. M. Deskmukh were nominated to represent growers on the Board of Directors of the East India Cotton Association.

SUBJECT 6.—*Cotton Policy in Surat.*

SUBJECT 7.—*Goghari cotton sowings in Navsari Tract.*

The question of the continuation of the present policy in regard to 1027 A.L.F. cotton, provoked exhaustive discussion as to the relative merits of 1027 A.L.F. and 1A and disclosed some divergence of opinion on the merits of the two strains of cotton, though there seemed to be general agreement on the subject of continuing the present policy of encouraging the growing of 1027 A.L.F. cotton over as wide areas as possible and of framing seed distribution schemes accordingly.

Dr. Burns, who thought the best course would be to distribute 1A north of the Tapti and 1027 A.L.F. south of it, till a better strain that suited both regions was evolved, went into the history of the controversy in regard to the merits of the two strains and recalled the successive steps which the Agricultural Department took on the recommendations of the Indian Central Cotton Committee and the varying reactions which the marketing fortunes of the two different strains evoked, when the Agricultural Department began to distribute seeds of both qualities of cotton after isolating several strains of which 1027 A.L.F. and 1A were found to be the purest and the best. Traders and cultivators had, however, found that 1027 A.L.F. fetched, on the balance, a better price than 1A, and, at any rate, with prospects in Lancashire in view, could count upon a wider market. Nevertheless, there were equally strong arguments in favour of 1A. Experimental tests and the experience of cultivators had established the superiority of 1A over 1027 A.L.F., in respect of yield per acre and ginning percentage, and there was no denying the fact that in the relative position of the two strains, the cultivator stood to gain by favouring 1A, in view of its higher acreage yield, irrespective of its marketing prospects in relation to those of 1027 A.L.F. Meanwhile two new factors had come into the field. The Sonsek Group of Co-operative Societies, who had set up a clamour in favour of 1A, had themselves to go in for 1027 A.L.F. following a marked deterioration in the seed of 1A. There was also an increasing demand for 1027 A.L.F. in Ahmedabad, as the purchases during the year had shown, and Lancashire was apparently satisfied with the results which experiments with this long-staple carried out through the Indian Cotton Enquiry Committee, Manchester, had yielded. The longer staple of 1027 A.L.F. was, therefore, a decisive point in favour of it considering its augmented market ability.

Demand for Long Staple and Spinning Qualities.

The real issue, therefore, which went in favour of 1027 A.L.F. was its better spinning quality and its longer staple—·91″ as against ·84″ of 1A—two facts which, from the point of view of the spinner and, incidentally that of the cultivator, overshadow its greater loss in blow room treatment. As Seth Kasturbhai Lalbhai pointed out in the course

of the discussion, this feature could always assure for 1027 A.L.F. a wider market. Also, there was always a difference of 3 to 5·7 counts in its favour which went to sustain its intrinsic worth at a higher level than 1A. Nevertheless, calculating the premium for 1027 A.L.F., at the rate of Rs. 11 per khandi, the grower realized Rs. 43–8–0 for 1A and Rs. 39–9–0 for 1027 A.L.F. per acre.

The difficulty lay, in spite of the intrinsically greater worth of 1027 A.L.F., in the fact that the cultivator, in the present scheme of prices, was not getting adequate price for 1027 A.L.F. The remedy pointed to a greater vigilence towards the marketing conditions, the need for which was becoming more apparent in view of the persistent campaign of the Sonsek group against 1027 A.L.F. The question of leaving the field clear to 1A could not be entertained if 1027 A.L.F. were not to be eventually elbowed out of the market, nor would the simultaneous distribution of the two varieties lead to anything but the mixing up of both the varieties. Another fact which had to be borne in mind was the increasing demand for long staple cotton,—a condition which 1027 A.L.F. eminently satisfies,—in view of the new avenue of marketing which preference in Lancashire is bound to stimulate. This fact was re-emphasised by Sardar Sampuran Singh.

No decisive factor in favour of 1A.

The fact that 1A brought greater profits to the cultivators, as Mr. Vonesch pointed out, was by no means a decisive and permanent feature in the market value of 1A, and hardly afforded a basis for a correct appreciation of its merits in relation to its prices, in view of the fact that 1A occupies a much smaller area than 1027 A. L. F. and consequently has a less encumbered market in relation to its production, coupled with this, the better marketing of this cotton by the Sonsek Societies might very well speak for the better prices obtained for it. As could be seen from the figures before the Committee, the difference in price between the two cottons varied only from Rs. 7 to Rs. 15 per khandy, but it was clear, from what the millowners had to say on the subject, that 1027 A.L.F. was worth Rs. 15–20 more than 1A. Nevertheless, 1A fetched more per acre of its produce than 1027 A.L.F. But there is also the added fact, to which Rao Bahadur Shirahatti drew attention, that 1A is grown in the same region as 1027 A.L.F. and shares its reputation; and the possibilities point in the direction of a decline in its prices if 1027 A.L.F. were to leave the field clear to it. Mr. Sane and Mr. Burt shared Dr. Burns' view that the growing of both cottons simultaneously in allotted regions—1A north of the Tapti and 1027 A.L.F. south of it—would answer the interests of 1027 A.L.F. The solution of finding better prices for 1027 A.L.F. lay in extending the markets, and with Lancashire stepping into the breach, prices of 1027 A.L.F. would be given a fillip. But as the position stood at present, there was no gainsaying the better financial returns which cultivators made out of 1A, both by reasons of its greater acreage yield and better ginning percentage. And though the greater profits thus derived were dependent on very precarious factors, it would

yet be difficult to force the cultivators to give up 1A for 1027 A.L.F. Bombay Presidency used only ⅓rd of the seed of 1027 A.L.F. produced by the Agricultural Department and the rest went outside to Rajpipla and Chhota Udepur where, despite penalties against the use of any but 1027 A.L.F., certain strips along the border grew Goghari.

Boiled down to essentials, however, the question was whether the subsidising of Rs. 66,000 which the Agricultural Research Sub-Committee had recommended for financing the seed distribution scheme should go in favour of 1A or 1027 A.L.F. It was clear that the growing of both in allocated regions simultaneously presented administrative difficulties in addition to leaving inducements for the two varieties to be mixed up. On a long view, estimating the relative merits of both, the scales seemed to be definitely weighed down in favour of 1027 A.L.F. and the question of improving its marketing, and securing its better prices was one of better organization as well as of expanding markets, to which the encouraging assurances from Lancashire might well be supposed to make a significant contribution. The proposition on being put to vote, there was a general declaration in favour of the present policy in regard to 1027 A.L.F.

SUBJECT 8.—*Adoption of universal standards for Indian cottons.*

The *Vice-President*, moving a resolution thanking the East India Cotton Association and the Karachi Cotton Association for their co-operation in the preparation of common standards for Indian cottons, pointed out that after the necessary spadework, efforts in that direction had to be kept in abeyance, while the Delhi Conference for the Indo-Japanese negotiations was in deliberation. Little, therefore, could be done along the lines intended and it was felt that, in the circumstances, it was only right to defer the date, till the President of the East India Cotton Association was in a position to recommend certain types after having been to Karachi. One little difficulty which, however, could be got over by amending their Articles of Association was that any decision that was taken by the Standards Sub-Committee was not technically binding on their Association. October, it was suggested, would suit very well for starting the work and a beginning with *Desi* Bengals, Sind-Punjab and Rajputana according to the classification of the East India Cotton Association and all Punjab-American could be made, for which the necessary preliminary work had been done.

As to Oomras it was hoped that the East India Cotton Association would fall in with any suggestion the Committee might make regarding the co-operation of agricultural bodies with the Association in preparing the standards. In answer to a question if Bengal standards could now be prepared, it was explained that standards once passed should hold good throughout the season. Delay of a year was hardly of consequence after having done without standards for so long.

The resolution was carried.

SUBJECT 9.—*Proposed introduction* of a common unit for the purchase of seed cotton throughout India.*

The meeting passed a resolution approving of the policy advised by the Government of Bombay and the Government of the United Provinces that both the Railway maund of 82⅔ lbs., which is based on the tola, and the khandy of 784 lbs. based on the pound avoirdupois, should be retained and that efforts should first be directed towards eliminating unauthorised maunds and khandies. It was pointed out that the Government of Bombay and the United Provinces had their systems of weight, one based on the tola and the other on the pound avoirdupois, and the views elicited from other provincial Governments had advocated the adoption of either of the two, according to the needs of the particular province. In the circumstances it was felt, there would be no agreement, if either was abolished and the best course open was to do away with unauthorised maunds and khandies.

SUBJECT 10.—*Conference of workers on cotton growing problems—Reference from the Empire Cotton Growing Corporation.*

This subject merely referred to the Conference of Workers on Cotton Growing Problems on a reference from the Empire Cotton Growing Association, and the Secretary's note inviting names of those officers who were likely to be in London on the occasion of the Conference to take place on the 18th and 19th July 1934 was recorded.

SUBJECT 11.—*Quarters for the Director, Institute of Plant Industry, Indore.*

The subject which next came up for discussion was the provision of quarters for the Director, Institute of Plant Industry, Indore, out of the Committee's funds provided for the specific purpose of promoting agricultural research. It was conceded that the Board of Governors of the Institute as a directive body on which the Indian Central Cotton Committee was represented had the right to lay down its policy; but the main contention was whether the funds provided by the Committee for the specific purpose of promoting research could be diverted to undertakings not intended by the Committee, and in the face of the unanimous opposition of those who represented the Committee on the Board of Governors.

A constitutional issue.

The specific instance in which the proposal for providing quarters for the Director of the Institute was hurried through raised an issue which, if it was left alone, would, it was felt, set up a precedent which the Committee could not afterwards challenge. Quite apart from the fact that the provision of quarters for the Director was no part of the objects for which the Committee gave away its funds. The Committee

*Appendix I (page 39).

which bore a substantial share in the annual budget expenditure of the Institute, in addition to having sunk Rs. 2,83,536–11–9 on capital expenditure, was entitled to demand that the grants made out of its funds were spent for the specific purposes for which they were intended and to call to account such as were not done. It was also maintained that the Rs. 40,000 allocated for the building purposes over the heads of those who represented the Committee on the Board of Governors was an enormous sum and out of all proportion to its utility, seeing that the sum so spent would be lost to the Committee for all time without any hope of return. Mr. Jackson, the Director of the Institute, contended that the proposed building did not involve the Committee in any new expenditure and that the expense incurred could be met by drawing on the savings from the Committee's previous grants which were effected by rigid economy in the Institute's expenses. It was pointed out to him that the Committee made its grants for specific purposes and the fact that it did not impose restrictions as to the method of spending them did not entitle the Institute to spend them in any manner it thought fit.

It was felt, therefore, in going into the question of next year's budget grant, that the Standing Finance Sub-Committee should go into the specific sum to be granted, not exceeding Rs. 1,15,000. An amendment to the original Resolution, reducing the budget of the Institute by Rs. 40,000 or such sum as the Standing Finance Sub-Committee might decide, was passed by a majority, four voting against it.

SUBJECT 12.—*The Trade Agreement with Japan.*

The work done by Sardar Rao Bahadur B. R. Naik and Mr. Vonesch as delegates of the Committee in connection with the Indo-Japanese Trade negotiations was accorded unstinted appreciation by the Committee. It was felt that the achievement made in regard to the cotton portion of the agreement with Japan was a matter for congratulation. It was stressed that in pressing the claims of Indian cottons, the interests of the growers had all along been the chief concern in which the millowners were quite willing to make whatever sacrifices they were urged to, in the firm belief that the prosperity of the industry was linked up with the interests of the growers. It was also urged that the work of the Special Sub-Committee to find new markets for short stapled Indian cotton should continue and that it should advise cotton growers as to what variety of cotton was likely to be in demand, both for home consumption and export abroad. It was obvious that the future of the short staple cotton, in so far as existing foreign markets gave any indications, was not particularly promising and the need at present was for exploring new markets. Meanwhile, a parallel need, with an eye to existing foreign markets and the tendency of Indian mills to go in for finer counts and consequently to use long stapled cotton, was to explore the possibilities of extending the areas under medium and long stapled cottons and to that end, to test medium stapled cotton in areas at present under short stapled cotton.

Incidentally, the problem of converting such areas, particularly those in the Central Provinces and Berar into long or medium stapled cotton growing areas did not afford basis for optimism and, for a long time to come, the problem of finding markets for varieties now being produced would remain. Lancashire, whose largest customer was India, might, it was urged, use more cotton of the kind that Japan and China can afford to use at present, especially that produced in Berar and the Central Provinces, by altering their machinery to suit the requirements of short stapled cotton. The need, however, for the establishment of a better proportion between long, medium and short stapled cottons could not be minimised in view of the changed conditions of spinning and the prospects of yet more changes looming ahead. There was no good reason to suppose that, at the end of the three years which limit the life of the Indo-Japanese Trade Agreement, a new agreement with Japan on the same lines would be possible; and in the meantime, with the creation of new cotton growing tracts in Sind which afford enormous possibilities for the production of long stapled cotton, it might be possible to shape the production of cotton in conformity with the demands of foreign markets.

In the main, however, our object should be to grow a cotton, wherever possible, which the Indian mills used, and for which there was a world demand. The Agreement with Japan could not be taken as an unmixed blessing, seeing we were tied down to definite commitments in regard to the purchase of manufactured fabrics from her.

The subject was wound up by the President testifying to the magnanimity and statesmanship which Indian manufacturers displayed in regard to the interests of the growers, even when they apparently came into conflict with their own.

SUBJECT 13.—*Greater use of Indian cotton in the United Kingdom.*

India has been by far and away the biggest customer the United Kingdom has had for her manufactured fabrics, and the reciprocal obligations on the latter, reinforced by political affiliations which intimately bind up the fortunes of the two countries together, ought to ensure a sufficiently dependable outlet for her raw cotton. It was some consolation that the United Kingdom, as Sir Richard Jackson who opened the discussion assured the Committee, was making experiments with short stapled Indian cottons and that they had given satisfactory results. It was also evident that the United Kingdom could, at any rate, find greater use for the kind of short stapled cottons, which China and Japan have been using. Recent efforts have shown that the production of long staple cottons in areas hitherto given to producing short staples is fraught with various difficulties, not the least among which was the poverty and illiteracy of the Indian cultivator. Attempts were being made to try longer staples on hitherto unexploited areas, particularly in Sind, but it could not be denied that the bulk of the cotton grown would continue to be of short staple type, and meanwhile, the problem of

finding market for the grower would remain as insistent as ever. The possibilities of raising more long stapled cottons, though hopeful on a long view, did not answer immediate exigencies. The Committee on its part was anxious to push those varieties which commanded a world market and, to that end, has been organizing research on various staples. Nonetheless Lancashire, with her long experience in textile manufacture could speed up tests on short staples and explore the possibilities of putting short stapled Indian cotton to greater use along lines which China and Japan have found practicable. It was also necessary for Lancashire to recognize that what little was produced in India of long stapled cottons found ready market in India, and with its output so restricted, it would not be possible for Lancashire to get much of that variety unless she was prepared to pay higher premium. It was, however, recognized that Lancashire, having to compete in the world market, would find it difficult to maintain her manufactures at competitive rates without access to raw cotton at prices that would enable her to sell her finished goods at remunerative rates. The best remedy, therefore, in the existing circumstances, Mr. Chunilal B. Mehta declared, in the course of the discussions, seemed to be to give effect to the resolution of the Indian Central Cotton Committee passed at Karachi in February 1933, asking for a tariff preference for Indian cotton which would enable Indian cotton to sell on a larger scale in Lancashire.

SUBJECT 14.—*Reduction of railway freight on cotton—Resolution to be moved by Rao Bahadur G. R. Kothare.*

Rao Bahadur Kothare who moved the resolution for the reduction of Railway freight on cotton pointed out that the precarious lookout for the cultivator occasioned by a general collapse of the prices had worsened to despair by the maintenance of Railway freights at an exhorbitant level. He recalled the recommendations of the Indian Central Cotton Committee made as far back as 1930 for a reduction of Railway freights, made to the Government of India. Ginning and pressing rates had gone down but relief had not come to the cultivator because the persistence of the present high level of Railway freight had dogged the free flow of cotton according to demand. Mr. Roberts supporting the resolution stated that the present railway freight on cotton from the Punjab to Bangalore was Rs. 6 per bale as against Rs. 3-8-0 by sea through Karachi, and as a result of his representation the Railway Board had offered to reduce the freight to Rs. 3-5-0, but on an examination of the details obtained, it was found that the North Western Railway had made no reduction in their share of the transport, though the others involved must have made reductions from anywhere between 100 per cent. to 40 per cent. Almost all the Railways belonged to the State, and there ought to be a uniform policy for all and the Railway Board ought to have powers to compel through telescopic rates, as if dealing with one railway system. The resolution on being put to vote was carried unanimously.

SUBJECT 15.—*Half-yearly Report* of the Publicity and Propaganda Officer.*

The next subject to come up was the Half-yearly Report of the Publicity and Propaganda Officer, reviewing the work done by him in diffusing knowledge of important economic improvements effected in Indian cottons as a result of various research schemes working under the auspices of the Committee.

The valuable assistance received from the Publicity Officer in the extension of cotton cultivation in the Right Bank areas of the Indus in Sind was particularly appreciated. In adopting the report, mention was made of the notable assistance given by the Publicity Officer in connection with the Indian Empire Exhibition recently held at Lahore, and the widespread popular knowledge of what the Indian Central Cotton Committee had been contributing to the cotton industry, trade and its economics generally, made possible through his efforts.

The Vice-President expressed gratification at the testimony borne to the efforts of the Publicity Officer from unexpected quarters, and felt sure that Mr. Mihra would give more time to touring and justify the addition of the Publicity Department.

SUBJECT 16.—*Report of the Cotton Forecast Improvement Sub-Committee.*

In view of the criticisms levelled against Provincial and All-India Forecasts, the Cotton Forecast Improvement Sub-Committee had been appointed to investigate the causes which led to the forecasts not being as reliable as could be; this Sub-Committee recommended, among others, a scheme of two years' tenure at an estimated cost of Rs. 10,694 for the improvement of the cotton forecasts of the Bombay Presidency. The resolution adopting the report of the Sub-Committee was carried.

SUBJECT 17.—*Technological Research—Progress Report† of the Director, Technological Laboratory.*

SUBJECT 18.—*Technological Research—Report of the Technological Research Sub-Committee.*

The adoption of the Report of the Director, Technological Laboratory, Matunga, formed the next subject of discussion and a resolution to the effect was carried unanimously after acknowledging the valuable services which, through the spinning and other tests initiated and carried on by the Laboratory, were done to the community engaged in that line.

The report of the Technological Research Sub-Committee which recommended the renewal of the contract of the Director of the Laboratory which would expire on 31st March 1934, for a further period of five years, on a revised scale of salary which, though adding increment to his present salary, is a substantial saving on that of his predecessor was also adopted. The report also referred to the revision of salary for new entrants as Junior Testers and the allocation of funds for the celebration of the 10th anniversary of the Laboratory.

* Appendix II (page 41). † Appendix III (page 45).

SUBJECTS.—19 *to* 22, 24 *to* 28, 30, 34 *and* 35—*Reports of the Agricultural Research Sub-Committee and the Standing Finance Sub-Committee, and Agricultural Research Schemes—Aims, Objects and Results.*

**Report of the Agricultural Research Sub-Committee.*

The Committee proceeded to consider the demand for grants for research and seed schemes in the order of precedence as drawn up by the Agricultural Research Sub-Committee.

CLASS I—SPECIAL SCHEMES.

(1) *The Punjab White-Fly Scheme.*—The Punjab White-Fly Scheme had made good progress during the last three years, but several aspects of it had remained untouched and Mr. Stewart had put up proposals for extending the scheme for a further three years in order to try out all the possibilities. The Agricultural Research Sub-Committee examined the proposals and recommended a curtailment of the programme to two years instead of three, by eliminating such items of the programme as appeared to be more or less of academic interest. The scheme was approved according to the recommendations of the Agricultural Research Sub-Committee.

(2) *Punjab Spraying Trials Scheme.*—During the investigations of the White-Fly Scheme certain insecticides were found very effective in killing the pests and the Committee, on the recommendations submitted, had sanctioned a scheme for one year at a cost of Rs. 11,250 for spraying 2,000 acres of cotton with some of the insecticides, and though 1,900 acres were actually sprayed during the year, there was a saving of nearly half the funds granted ; so an additional amount of Rs. 1,250 would enable the scheme to be extended for a year more. The Punjab Provincial Cotton Committee which considered the results so far obtained had strongly felt that a year's trial would be too inadequate to give any indication as to their utility, but in view of their demonstrable successes should be given a trial for a year or two more. The Agricultural Research Sub-Committee had also approved of this proposal and the scheme as recommended was approved.

(3) *Seed Distribution and Extension Scheme, Tirupur.*—Rao Bahadur Ananda Rao referred to the appointment by the Committee of a Business Manager to help the group of Co-operative Societies in the Coimbatore District in the grading of cotton in order to spread an improved variety of Cambodia cotton, for a period of five years. The Business Manager took up his work in 1931 and his term would expire in 1936, but in the meanwhile the Committee had sanctioned another scheme for the distribution of Co. 2 seed in the Tirupur area and had entrusted the Business Manager with this scheme also which would last till 1937. The proposal was therefore to extend his term till the end of the Seed Scheme and to

* Appendix IV (page 51).

provide him with clerical assistance and office accommodation, as the Co-operative Societies who had undertaken this part of the bargain had failed to keep to it after the first year. The Agricultural Research Sub-Committee while approving of part of the proposal thought it too early to consider extension of his appointment, and the proposal was approved according to its recommendation.

(4) *Surat Cotton Seed Distribution and Extension Scheme* (*Subject* 27).—This scheme which was, as Dr. Burns explained, only a continuation of the policy of spreading 1027 A.L.F. in Surat, would involve a further sum of Rs. 66,390 and had been approved by the Agricultural Research Sub-Committee. It would be extended over a period of five years, and in view of the danger to which it was exposed, this propaganda to cover the whole area as quickly as possible was necessary and the amount sanctioned would be spent on the staff engaged for the purpose. The proposal was approved by the Committee.

Class II—New Research Schemes.

(1) *Scheme for survey of the disease of malformation in Punjab American cottons* (*Subject* 20).—This was a proposal for a grant of Rs. 2,674 for the provision of an additional assistant who would work under the Cotton Research Botanist in ascertaining the extent to which the disease of malformation which attacked American cotton in the Punjab was prevalent. This disease was serious enough to warrant a research of this nature, but the Punjab Government had not come forward to help, and the scheme, as intended at present, was only to find out the incidence and importance of the disease. The scheme as recommended by the Agricultural Research Sub-Committee was sanctioned.

(2) *Central Provinces and Berar Entomological Scheme* (*Subject* 19).—The Boll Worm was doing considerable damage in the Central Provinces and Berar, and the scheme, which was sanctioned by the Agricultural Research Sub-Committee and was meant to find out the extent of the damage and to see if it would be worthwhile applying the methods recommended in the Surat Boll Worm Research Scheme, was sanctioned for two years at a total cost of Rs. 6,773.

Class III—New Seed Schemes.

Among the new seed schemes approved by the Committee on the recommendations of the Agricultural Research Sub-Committee was one *for the multiplication and supply of pure Banilla cotton seed on the Deccan Canals* (Subject 26) and (2) another *for the extension of long staple cotton in the Central Provinces and Berar* (Subject 35). Central Provinces and Berar have been principally short stapled cotton growing areas and very largely dependent on a single buyer. It was thought desirable, in order to simplify this problem, to maintain a reasonable proportion between short, medium and long stapled cottons.

(3) Another scheme submitted by the Director of Agriculture, United Provinces, *for the propagation of C.* 402 *cotton in the Hardoi and*

neighbouring districts of Lucknow and Sitapur. (*Subject* 24)—a task which is facilitated by the opening up of new cotton areas under the Sarda Canals—was also sanctioned according to the recommendations of the Agricultural Research Sub-Committee.

(4) *Wagad Seed Distribution and Extension Scheme* (*Subject* 25).—This scheme is intended to spread Wagad 8, which is found suitable for the typical Wagad tract and is found to bring greater outturn and higher ginning percentage and Rs. 4 more per acre than the local mixture, over an area of 125,000 acres in Ahmedabad district. The general concensus of opinion of the Committee to defer the consideration of this scheme till the next meeting of the Committee in view of its not being of any urgent importance, was, however, adopted.

Priority of Schemes.

In considering the financing of schemes proposed to the Committee, the *President* pointed out that Class I schemes were continuation schemes and that their stoppage would mean loss of staff and money. The prosecution of the schemes was agreed to. He said that there was no order of precedence as between the schemes under Classes II and III, the two small schemes under Class II, whose total cost did not exceed Rs. 9,447 could not be postponed, and the only point that remained was to examine the order of priority under Class III, which according to the recommendations of the Agricultural Research Sub-Committee was approved.

The Committee approved of the recommendation of the Agricultural Research Sub-Committee that the *Scheme for Cotton Jassid Investigation in the Punjab* (Subject 21) and the *Scheme for Boll-worm Clean-up demonstration in Baroda* (Subject 22) be referred back to the officers concerned for re-submission.

A resolution adopting the report of the Agricultural Research Sub-Committee was also carried.

Rao Bahadur Shirahatti drew attention to the plight of the Hubli Society which has been encouraging the growing over larger areas of long stapled cottons like Jayawant, whose shrinking finances were a cause for concern, and referring to the recommendation of the Standing Finance Sub-Committee that there should be uniformity in subsidizing seed schemes, pleaded for an equal rate per acre for all the seed schemes. The recommendations of the Agricultural Research Sub-Committee in this connection were put to vote and declared carried.

** Report of the Standing Finance Sub-Committee.*

The purchase of two plots round about the Technological Laboratory grounds in view of the needed extensions of the Laboratory, as referred to in paragraph 4 of the Report of the Standing Finance Sub-Committee

* Appendix V (page 55).

engaged the attention of the Committee. The Vice-President said that the purchase of the plots was expedited as the Improvement Trust were not likely to keep them unsold till it became possible for the Committee to take in hand the actual work of extensions. The Committee was not committed to any immediate expenditure on the proposed extensions, and the Finance Sub-Committee would consider the suggestion of Mr. Richards that in cases where considerable expenditure was involved, the full Committee should have an opportunity of examining the proposals on which the expenditure was proposed to be made, and expressing its opinion on them, and put up proposals if necessary before the full Committee. Meanwhile, the purchase of the plots was made in anticipation of extension, as they were adjacent to the Laboratory grounds and thus offered suitable sites for the extension of the blow-room, yarn testing section and the research laboratory, and as could be seen from the proposals put up by Dr. Nazir Ahmad, the extension was unavoidable as the grounds owned by the Laboratory did not provide sufficient building area for the purpose.

The report of the Standing Finance Sub-Committee was adopted and a resolution was passed approving of the Revised Estimates for 1933-34 and the Budget for 1934-35 as amended by the Committee.

Agricultural Research Schemes—Aims, Objects and Results.

In view of the impending consideration of the various research schemes and of financing their annual expenditure, the Vice-President drew attention to the following statement, which the Secretary had at his suggestion prepared showing the opening balances, as anticipated on the 1st April every year during the next five years :—

	Rs.
1st April 1934	25,70,000
,, ,, 1935	17,09,467
,, ,, 1936	12,78,674
,, ,, 1937	9,20,075
,, ,, 1938	7,84,002

In estimating these figures, the Secretary had assumed that Cotton Cess Collections would amount to Rs. 5 lakhs in round figures and that all the new extension schemes which had been approved by the Agricultural Research Sub-Committee at its last meeting might be voted. But no provision was made for expenditure on the Institute of Plant Industry after 31st March 1935 when the Committee's contract with the Institute would expire, or on the United Provinces Pink Boll-Worm Extension Scheme, as the scheme had been held up through suspense as to the intentions of the Government of the United Provinces. Mr. Vonesch pointed out that the estimates were based on the assumption that apart from schemes at present under consideration, no new schemes would be sanctioned during the next five years, a course which seemed unthinkable. Every scheme was entered into with an eye to definite economic results, and it were better that those which did not offer

reasonable prospects of success were closed down. Mr. Richards suggested the augmenting of the Committee's funds by increasing the Cotton Cess to the original figure of 4 annas a bale, as even if the least possible contribution to the maintenance of the Indore Institute were made, in addition to carrying out the Committee's schemes already under consideration, the Committee would very likely be faced with a deficit at the end of 1939 or find itself in the position of watching the progress of a progressively diminishing number of schemes. But as the Vice-President made it plain, there was no question of asking for an increase in the Cotton Cess unless the Committee could justify in a much better manner what it had already spent. The Committee had already spent about Rs. 75 lakhs, and even if it was possible to ask for an increase in the Cotton Cess, they should examine its work and see if the progress made so far was satisfactory. The only correct solution seemed to be to arrange for the Agricultural Research Sub-Committee to meet towards the end of April and not later than the 15th May and to ask the various members of the Sub-Committee and particularly the expert technical members, to oblige by sending to the Secretary of the Committee in the meantime, their memoranda which could be studied by them and considered at the meeting of the Sub-Committee. A resolution, accordingly, embodying the above proposals being moved by Mr. Burt and seconded by the Vice-President, was declared carried.

SUBJECT 23.—*Provincial Cotton Committees—Proceedings of the Punjab Provincial Cotton Committee.*

The Proceedings of the meeting of the Punjab Provincial Cotton Committee held at Lahore on the 20th December 1933 placed before the Committee for information were recorded.

SUBJECT 29.—**Summary of Proceedings of the Local Sub-Committee.*

In recording the summary of the proceedings of the Local Sub-Committee, reference was made to the very unsatisfactory nature of control over short-staple cotton and *kapas* arriving at Indore and the need to stiffen it in view of which it was decided to ascertain the difficulties of the Indore Durbar in enforcing the Committee's recommendations or in falling in line with the commercial community in that State. In view, however, of the failure of the Indore and Gwalior States' representatives to attend the last meeting of the Local Sub-Committee consideration of the subject had to be deferred till a more suitable opportunity occurred, after recording, in the meantime, the point of view of the Indore trade representatives, Messrs. R. C. Jall and Manmalji Kasliwal.

SUBJECT 31.—*Provincial Cotton Committees—Proceedings of the Sind Cotton Committee.*

The Proceedings of the meeting of the Sind Cotton Committee held on the 3rd December 1933 were recorded.

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* Appendix VI (page 77).

SUBJECT 32.—*Loan of Autoclave and glazed drain pipes to the Institute of Plant Industry, Indore.*

This subject referred to the loan from the Committee of an Autoclave and glazed drain pipes to the Institute of Plant Industry, Indore, for carrying on wilt research. The question was whether the Institute was entitled to any special consideration in addition to the annual grants from the Committee for undertaking wilt research.

After the discussion that followed it was agreed that if the Institute wanted to acquire it permanently, it should pay for it but that it could make use of it while schemes, for which it was intended, were in abeyance or no longer in operation.

SUBJECT 33.—*Cotton Development in the Barrage areas of Sind—*Note by the Chief Agricultural Officer in Sind.*

In agreeing to refer Mr. Jenkins' note to the Special Sub-Committee appointed to deal with the question of a wider market for Indian cotton, attention was drawn to the Chief Agricultural Officer's opinion as to the wisdom of extending improved strains of Sea Island, Egyptians and Americans in the absence of improved conditions of marketing and the assurance of adequate returns. The note stated that in conformity with the policy of the Committee, the Department of Agriculture had confined their attention entirely to the growing of long-staple cotton. The second point was to amend the Cotton Ginning and Pressing Factories Act to enable the regulation of the construction of new ginning and pressing factories in Sind, a need on which traders, agriculturists and the Sind Cotton Committee were all agreed. The Indian Central Cotton Committee was accordingly urged to move the Government of India on the need for making the necessary amendments in the Act. The note also drew attention to the very urgent need for the securing of increased and more assured demand for Sind Americans, by propaganda or otherwise, as in the absence of the stimulus of a greater premium and having regard to its lesser yield, in comparison with *Desi* variety, it was feared that the area under Americans would soon decline.

SUBJECT 36.—*Provincial Cotton Committees—Proceedings of the Central Provinces Provincial Cotton Committee.*

The Indian Central Cotton Committee has been for the last three or four years making annual grants to promote the marketing of improved varieties of cotton in the Central Provinces. The decision of the Central Provinces Provincial Cotton Committee demanded that, instead of piecemeal annual grants, a seed scheme for five years in the first instance may be sanctioned.

This matter will be put up before the next monsoon meeting.

The Proceedings were recorded.

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* Appendix VII (page 78).

SUBJECT 37.—*Auditors' fees.*

The President said that Messrs. S. B. Billimoria & Co. had accepted the reduced rate of fees and that they might continue to be the Committee's Auditors.

This was agreed to.

With a hearty vote of thanks from Mr. Chunilal B. Mehta to the President, the meeting came to a close.

R. D. MIHRA,
Publicity Officer.

RESOLUTIONS.

The Trade Agreement with Japan.

1. "That the Indian Central Cotton Committee marks its approval in a very cordial manner of the work done by Sardar Rao Bahadur B. R. Naik and Mr. Vonesch as delegates of this Committee in connection with the Indo-Japanese trade negotiations".

Vote of thanks to His Excellency the Governor of Bombay.

2. "That the best thanks of the Committee be voted to His Excellency the Governor for the honour he had done in visiting us this morning".

Appointment of Vice-President.

3. "That Sir Purshotamdas Thakurdas be re-appointed Vice-President for the year 1934–35".

Standing Finance Sub-Committee.

4. "That the following members be appointed to form the Standing Finance Sub-Committee for the financial year 1934–35 :—

Sir Purshotamdas Thakurdas,
Dewan Bahadur Sir T. Vijayaraghavacharya (*ex-officio*).
Mr. S. D. Saklatvala,
Sardar Rao Bahadur Bhimbhai Ranchodji Naik,
Mr. J. Vonesch,
Rao Bahadur G. R. Kothare,
Mr. J. O. G. Barnes,
Mr. Chunilal B. Mehta and
Mr. H. B. Moore".

Cotton Ginning and Pressing Factories Sub-Committee.

5. "That the following members be appointed to form the Cotton Ginning and Pressing Factories Sub-Committee :—

The Vice-President,
Mr. J. Vonesch,
Mr. J. O. G. Barnes,
Mr. Chunilal B. Mehta,
Mr. G. B. Kotak,
Mr. J. Nuttall,
Mr. W. Roberts,
Mr. E. J. W. Plummer,
Mr. Y. G. Deshpande,
Mr. H. B. Moore,
Rao Bahadur M. G. Deshpande and
Lala Shri Ram (Co-opted member)".

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Local Sub-Committee.

6. "That the following members be appointed to compose the Local Sub-Committee :—
Sir Purshotamdas Thakurdas,
Dewan Bahadur Sir T. Vijayaraghavacharya,
Mr. S. D. Saklatvala,
Sardar Rao Bahadur Bhimbhai Ranchodji Naik,
Mr. J. Vonesch,
Mr. H. B. Moore,
Mr. Girdharlal B. Kotak,
Mr. J. O. G. Barnes,
Mr. Chunilal B. Mehta and
Mr. C. V. Sane ".

Agricultural Research Sub-Committee.

7. "That the following members be appointed to form the Agricultural Research Sub-Committee :—
I. The President—Dewan Bahadur Sir T. Vijayaraghavacharya (*ex-officio*).
II. The Vice-President—Sir Purshotamdas Thakurdas (*ex-officio*).
III. The Director, Institute of Plant Industry, Indore—Mr. F. K. Jackson (*ex-officio*).
IV. Co-operative Representative—Rao Bahadur M. G. Deshpande (*ex-officio*).
V. Cotton Growers' Representative—Mr. W. Roberts.
VI. Cotton Trade Representative—Mr. H. B. Moore.
VII. Four Agricultural Officers—
Dr. W. Burns,
Mr. J. H. Ritchie,
Mr. H. R. Stewart,
Mr. V. Ramanatha Ayyar.
VIII. Additional Members—
Mr. B. C. Burt,
Dr. L. C. Coleman,
Mr. D. N. Mahta,
Rai Saheb Thakur Ram Prasad Singh,
Mr. H. H. Pandya,
Mr. W. J. Jenkins,
Mr. P. B. Richards,
Mr. S. V. Ramamurty,
Mr. C. V. Sane,
Mr. Chunilal B. Mehta.
IX. Co-opted members—Cotton Research Botanist, Lyallpur and Cotton Research Botanist, Parbhani, and
X. The Secretary ".

Technological Research Sub-Committee.

8. "That the following members form the Technological Research Sub-Committee :—

The President, (*ex-officio*),

The Vice-President, (*ex-officio*),

Mr. S. D. Saklatvala,

Mr. B. C. Burt,

Mr. H. R. Stewart,

Dr. W. Burns,

Mr. Chunilal B. Mehta,

Mr. Y. G. Deshpande,

Seth Naranlal Jivanlal,

Mr. S. V. Ramamurty,

Mr. H. B. Moore,

Lala Shri Ram,

Mr. E. J. W. Plummer and

Dr. Nazir Ahmad,

The Bombay Millowners' Association, The Ahmedabad Millowners' Association and The East India Cotton Association will be asked to nominate two representatives each ".

Research Students Selection Sub-Committee.

9. "That the Research Students Selection Sub-Committee be composed of the following members :—

The President,

The Vice-President,

Mr. B. C. Burt,

Dr. W. Burns,

Mr. P. B. Richards,

Mr. H. R. Stewart,

Mr. J. H. Ritchie,

Mr. S. V. Ramamurty,

Dr. L. C. Coleman,

Mr. H. H. Pandya,

Mr. W. J. Jenkins,

Mr. F. K. Jackson,

Mr. C. V. Sane,

Dr. Nazir Ahmad ".

Malpractices Sub-Committee.

10. "That the Sub-Committee on Malpractices consist of the following members :—
The Vice-President,
Mr. H. B. Moore,
Seth Naranlal Jivanlal,
Mr. J. O. G. Barnes,
Mr. Chunilal B. Mehta,
Dr. W. Burns,
Sardar Sampuran Singh,
with power to co-opt ".

Cotton Forecast Improvement Sub-Committee.

11. "That the Cotton Forecast Improvement Sub-Committee be composed of the following :—
The President,
The Director-General of Commercial Intelligence and Statistics,
The Director of Agriculture, Bombay Presidency,
The Director of Agriculture, Punjab,
The Director of Agriculture, Madras,
The Director of Agriculture, United Provinces,
The Director of Agriculture, Baroda,
The Director-General of Commerce and Industry,
H. E. H. the Nizam's Government, Hyderabad and
The Director of Land Records, Central Provinces and Berar ".

Adoption of Universal Standards for Indian Cottons.

12. "The Indian Central Cotton Committee thanks the East India Cotton Association and the Karachi Cotton Association for their co-operation in the preparation of common standards for Indian cottons. It is confident that this step towards unification will, in time, prove to be of considerable advantage both to the grower and the trader ".

Proposed introduction of a Common Unit for the purchase of Seed Cotton throughout India.

13. "That in regard to the unification of weights for *kapas* the Indian Central Cotton Committee approves of the policy advised by the Governments of Bombay and the United Provinces, viz., that both the Railway maund of 82-2/7 lbs., which is based on the tola, and

the *khandy* of 784 lbs., which is based on the pound avoirdupois, should be retained and that efforts should first be concentrated on the elimination of unauthorised maunds and unauthorised *khandies* ".

Quarters for the Director, Institute of Plant Industry, Indore.

14. " That the Budget of the Institute of Plant Industry, Indore, for 1934–35 be reduced by Rs. 40,000 or such sum as the Standing Finance Sub-Committee might decide ".

Reduction of Railway Freight on Cotton.

15. " In view of the low prices of cotton continually for the last four or five years, the Indian Central Cotton Committee earnestly requests the Indian Government to prevail upon the Railway Board to reduce the railway freight on cotton so as to afford relief to the agriculturists ".

Half-yearly Report of the Publicity and Propaganda Officer.

16. " That the Report of the Publicity and Propaganda Officer be adopted ".

Report of the Cotton Forecast Improvement Sub-Committee.

17. " That the Report of the Cotton Forecast Improvement Sub-Committee be adopted ".

Progress Report of the Director, Technological Laboratory.

18. " That the Progress Report of the Director, Technological Laboratory, be adopted ".

Report of the Technological Research Sub-Committee.

19. " That the Report of the Technological Research Sub-Committee be adopted ".

Report of the Agricultural Research Sub-Committee.

20. " That a special meeting of the Agricultural Research Sub-Committee be fixed as early as feasible in April, but not later than May 15th, to consider the papers on Subject 34 of the Agenda of this meeting, and that all members of the Agricultural Research Sub-Committee, specially technical members, be asked to submit their memoranda to the Secretary not later than 31st March 1934 ".

21. "That the Report of the Agricultural Research Sub-Committee be adopted".

Report of the Standing Finance Sub-Committee.

22. "That the Report of the Standing Finance Sub-Committee be adopted.".

Revised Estimates for 1933–34 *and Budget for* 1934–35.

23. "That the Revised Estimates for 1933–34 be approved". "That the Budget for 1934–35, as now amended. be sanctioned".

APPENDIX I.

SUBJECT 9.—*Proposed introduction of a common unit for the purchase of seed cotton throughout India.*

Secretary's Note.

The question of the "standardisation of weights for cotton transactions" was considered at the 21st meeting of the Indian Central Cotton Committee in July 1930, and it was decided to leave it for examination by the Local Sub-Committee. The subject was accordingly taken up at the 60th meeting of the Local Sub-Committee in October 1930 when it was decided to defer its consideration. At its 75th meeting in October 1932, the Local Sub-Committee considered a letter from the Karachi Joint Cotton Committee suggesting the adoption of the Bengal maund of 82 2/7 lbs. as the basic weight for cotton rates in all the organised cotton markets in India, particularly in the two governing markets, Bombay and Karachi. The question was again put off pending the publication of the Bill for the standardisation of weights and measures then under the consideration of the Bombay Legislative Council. The bill has since become law and under its provisions in any area to which the Act may be applied by Government Notification, only the prescribed weights can be used.

At its 26th meeting held in February 1933 the Committee considered a note from Mr. B. A. Collins suggesting a unit of 700 seers (= 1,440 lbs.) or 350 seers (= 720 lbs.) for seed cotton throughout India. This note was referred to the East India Cotton Association and the Karachi Joint Cotton Committee for an expression of opinion. The East India Cotton Association were in favour of the unit of weight being the candy of 784 lbs. while the Karachi Joint Cotton Committee urged the adoption of the standard railway maund of 82 2/7 lbs. The Committee decided to ascertain the views of the Local Governments on the possibility of the introduction of common units within provinces and as between different provinces.

The Governments of Bombay, Madras, Punjab, United Provinces and the Central Provinces were accordingly addressed and copies of their replies are attached.* A brief summary of these is given below :—

The Bombay Government are in favour of unification in principle on an all-India basis but they do not think that the time has come yet for complete unification. They have recently passed the Bombay Weights and Measures Act, 1932, under which the Bombay maund of 40 seers or 3,200 tolas with its multiples and sub-multiples, and the pound avoirdupois equivalent to 7,000 grains with its multiples and sub-multiples are recognised as standards. The Act however has not been brought into force as yet. The Local Government state in paragraph 4 of their letter that the divergent interests of Sind and the Bombay markets have been safeguarded by recognising as standards the railway maund as well as the avoirdupois series of weights, but the Bombay Act makes no mention of the Railway maund.

The Bombay Government are of opinion that in any all-India legislation, the two series of standards adopted by them should be recognised.

The Punjab Government are not in favour of any change. The maund (of 82 2/7 lbs.) in use in the Punjab is already used over a wide area in Sind and part of the United Provinces. They consider that different weights and measures for different staples would result in the cultivators being cheated.

The Madras Government agree to the adoption of the 28 lbs. cotton maund as a common unit for all cotton transactions. The general trend of the merchants' opinion is in favour of adopting the Bombay Candy of 784 lbs. or 28 maunds of 28 lbs. each. The Madras Candy of 400 lbs. could be reduced to 392 lbs. net which would be half the Bombay Candy.

The Government of the Central Provinces state that important cotton mills, municipalities and members of the Board of Industries are generally in favour of the introduction of uniform weights for cotton transactions throughout India, the cotton mills favouring the Bombay weights of a candy of 784 lbs. and sub-multiples thereof. The Local Government consider the adoption of uniform weight standards to be a necessity and that not much inconvenience would be caused in practice by a change.

The Government of the United Provinces declare that they have already prescribed standard weights for cotton transactions, viz., the maund of 82 2/7 lbs. and its fractions and the pound avoirdupois and its multiples. They are opposed to the adoption of a

* Not printed.

separate cotton maund of 28 lbs. They would not be opposed to a system based on the cwt. by defining a bhoja as 3½ cwts. and a khandi as 7 cwts.

A summary of the opinions of the East India Cotton Association and the Karachi Cotton Association who were also consulted by the Bombay Government is given below :—

The East India Cotton Association state that in the opinion of their Board the adoption of measures towards the unification of weights in all cotton transactions throughout India is not feasible at present. They advocate the standardisation of the Bombay khandi of 784 lbs. for all transactions in cotton, *kapas* and cotton seed in the Presidency of Bombay excluding Sind, but including Indian States in the Presidency limits.

The Karachi Cotton Association are in favour of the adoption of a uniform system of weights throughout India particularly in the Bombay Presidency. The standard they consider suitable is the railway maund of 82 2/7 lbs.

The views of the Indian Cotton Committee on this subject are given in the following extract from its report :—

Standardisation of weights.

"212. Before leaving the general question of marketing, we would mention that, during the course of our tour, our attention was frequently called to the hampering effect on the cotton trade which results from the great variety in the weights used for transactions in cotton not only in different provinces but also in different districts and parts of districts in the same province. Over the greater part of the Bombay Presidency, cotton is bought and sold on the basis of a *khandi* of 784 pounds of lint, which is, in consequence, known as the Bombay *khandi*. In the south of the Presidency, the unit is the *nag* of 336 pounds. In Khandesh, the *khandi* varies from 160 to 250 pounds and the weight of the *maund* varies from 42 pounds at Bodwad to 144 pounds at Dhulia and Amalner. The Madras *khandi* is only 500 lbs. of lint, but in the 'Westerns' tract, cotton is sold by the *nag* of 312 pounds. At Cawnpore, there is a special cotton maund of 100 pounds for both lint and *kapas*. In other parts of the United Provinces, the standard maund of 82 2/7 pounds is generally used for *kapas*, lint being sold in bales of 400 lbs. In the Punjab and Sind, both *kapas* and lint are sold on the standard *maund* of 82 2/7 pounds. It is only in the Central Provinces and Berar that the weights used in the cotton markets have been prescribed or are regulated by Government. In both cases, the maund used is one of 28 pounds. Under the by-laws of the Nagpur market, the *khandi* is one of 784 pounds of *kapas* and a *bhoja* means 392 pounds of lint. The *khandi* and the *bhoja* are not defined in the rules of the Berar markets but are, in practice, the same as those in use at Nagpur.

The advantages to the trade which would result if some uniform system of weights could be adopted for all transactions in cotton are so obvious that they need not be enlarged upon. At the same time, a fruitful source of loss to the cultivator would be removed. There is no doubt that the present lack of system offers great opportunities for cheating him, of which many dealers and others are not slow to avail themselves and they are assisted in doing so by the fact that, even where the *maund* is in use, many of the weighbridges in ginneries are marked in hundred-weights, quarters and pounds instead of in *maunds*. We are, therefore, strongly of opinion that in the interests both of the trade and of the cultivator, the weights used in cotton transactions throughout India should be standardised. The Bombay *khandi* is such a well known weight and is already in use in so many of the principal cotton tracts in India that we consider it desirable that the standard weights should be sub-multiples of that. We do not, therefore, support the recommendation of the Weights and Measures Committee of 1913-14, that the standard *maund* of forty *seers* or 82 2/7 pounds should be adopted as this is only used, at present, for cotton transactions in the Punjab, Sind, and parts of the United Provinces, does not correspond to the avoirdupois scale and bears no relation to any of the *khandis* in use in cotton growing tracts. The *maund* we would recommend is one of 28 pounds. Fourteen *maunds* would then be equal to one *bhar*, *naga*, or *bhoja* of 392 pounds and two *bhars*, nagas or bhojas would be equal to one *khandi* of 784 pounds. The advantage of this scale is that it fits in with the scale which, as we have pointed out, is in use in the Bombay markets as well as in the principal cotton growing tracts. It also fits in with the weight of the ordinary bale which, everywhere in India, except in the south of Madras where it is 500 pounds, is 400 pounds gross. The allowance for tare is eight pounds which reduces the net weight of the bale to 392 pounds or exactly half a *khandi*. Its adoption would therefore cause the least dislocation and inconvenience to the trade. To avoid confusion, we would recommend that the *maund* we have suggested should be known as the 'cotton *maund*.' We consider it desirable that all the weights used in cotton transactions should be in pounds avoirdupois and, in our opinion, the introduction of the *seer* into the scale would only cause unnecessary complication."

"213. As regards the measures which should be taken to bring about a universal adoption of the scale suggested above, we have included in the scheme for the licensing of ginneries and presses put forward in paragraphs 223 *et seq* below, a recommendation that one of the conditions on which licenses should be granted to ginneries and presses should be that only the certified standard weights prescribed for the tract should be used. We would further recommend that, in the legislation, we have proposed in regard to the establishment of cotton markets in provinces other than the Central Provinces and Berar, power should be taken to prescribe standard weights to be used in such markets and that, in any rules framed under such legislation, a rule should be inserted similar to that already in force in Berar, under which the Chairman of the Market Committee, every member of the Committee and every employee of the Committee duly authorised to do so, are entitled, at any time and without notice, to inspect, examine and test any scale or weights used, kept, or possessed in any open place within the limits of a market. If standard weights are prescribed for markets, ginneries and presses, there can be no question but that their adoption for all transactions in cotton will follow in a very short time. The weights, which we recommend should be kept in all markets, ginneries and presses, are the following :—1, 2, 4, 7, 14, 28, 56 and 112 pounds. These weights would be duly tested and stamped before issue and arrangements should be made to retest and restamp them every year as well as to test all scales in use, in order to prevent the possibility of their being tampered with, as is not infrequently the case with the weights and scales used at present. We would further recommend that all weigh-bridges and platform-bridges in use in markets, ginneries or presses, should be marked with the above scale. We are so impressed with the disadvantages of the present system, both to the trade and the cultivator, that we consider that, if there are difficulties in prescribing uniform standard weights for the whole of India, an attempt should, at any rate, be made to secure uniformity within each province."

Measures necessary to bring about standardisation of weights.

From the replies received from Local Governments it will be seen that there is still considerable diversity of opinion as to the standard of weight which should be adopted for all-India, though the desirability of having a uniform standard seems to be generally recognised. There is no general unanimity either as to the practicability of introducing a separate standard of weight for cotton transactions only.

APPENDIX II.

SUBJECT 15.—*Half-yearly Report of the Publicity and Propaganda Officer.*

In the half-yearly Progress Report submitted before the 27th meeting of the Indian Central Cotton Committee, a detailed account was given of the noteworthy features of Publicity and Propaganda work which had been done during the seven months preceding the meeting. It recorded not a few successful instances of collaboration between the Provincial Departments of Agriculture and the Propaganda Branch of the Committee. The advent of its 28th meeting finds the Committee's activities far more widely known and the effect of its steadily growing propaganda far more definitely felt than was the case eighteen months ago.

The results of this further work are wholly in consonance with and as encouraging as those already reported in the last report and need not be stated in detail. It is satisfactory again to be able to report that during the period under review not only has the broadcasting of informational matter been well maintained but marked progress has been made in the spreading of practical and scientific knowledge of the improvement of cotton. This fact has certainly increased the opportunities of the Committee for usefulness and has already been responsible for winning the confidence of the trade and the countryside. The following pages give a summary of the special features of the publicity and propaganda work during this half-year under report.

Press Communiqués.

Work in this direction continued to make progress. A new series of communiqués treating with the following schemes and bringing together the available information was issued. The communiqués were greatly in demand. Both the English and Vernacular Dailies and periodical journals published them *in toto*. Provincial Departments of Agriculture and other allied Departments and Associations thought them useful. The Director of Agriculture, Bombay, for instance, requisitioned thirty copies of press communiqués for distribution to the officers of his Department and the cotton members of the Divisional Boards of Agriculture as he found the information contained in them

very useful. Similarly the Secretary of the Indian Cotton Enquiry Committee (Manchester) wrote asking for additional copies of communiqués.

The following is the list of the Press Communiqués :—

(1) 27th Meeting of the Indian Central Cotton Committee—A summary of proceedings of the meeting.

(2) Hyderabad quest for better Gaorani—Various stages of experiments on this indigenous variety and studies to evolve a strain which will have its valuable spinning qualities and also possess other suitable economic characters of good yield and spinning outturn.

(3) Safety-first measures against importation of cotton pests—How and why American cotton and foreign cotton seed are fumigated.

(4) Testing of Indian cottons for quality at the Technological Laboratory—A press note on Bulletin No. 25, Series A, published by the Director of the Technological Laboratory at Matunga.

(5) The Institute of Plant Industry, Indore—A description of the work being done on production and improvement of raw cotton.

(6) The United Provinces Entomological Scheme—Heat treatment measures to control the Pink Boll-worm.

(7) Improvement of cotton in the Punjab—Botanical and Agricultural Research.

(8) Importance of Punjab Root Rot Scheme.

(9) Object of the Pink Boll-worm Scheme in the Punjab.

(10) Damage caused to the Punjab cotton crop by the White Fly.

(11) Defibrating and Delinting cotton in the Punjab.

(12) Bikaner Gang Canal Scheme.

(13) Harmful effects of Cholam in succeeding cotton crop.

(14) Cotton Leaf Hopper in the Punjab.

Press Communiqués were given prominence in most of the British cotton trade journals together with editorial introductory notes drawing the attention of the public to the importance of the subjects dealt with. In at least one case, they figured also on the poster of a journal—thus proving that the Press and the public alike were realising the national, imperial and international value of Indian cotton.

Pamphlets.

A draft account of the detailed study of the life history and habits of the spotted boll-worm in South Gujerat, estimate of damage caused by this pest and the various control measures tried was prepared, following the collaboration that took place between the Bombay Department of Agriculture and the Publicity Department of the Indian Central Cotton Committee in the clean-up campaign at Broach. At the instance of the Director of Agriculture, Bombay, the question of publication was deferred to April 1934, when more information will be available as to the effect of the big clean-up of 1933.

Brochure.

A profusely illustrated brochure entitled "The Indian Central Cotton Committee, its objects, activities and achievements, with special reference to the Punjab, Sind, the United Provinces and Central India" was published in December and freely distributed at the Indian Empire Exhibition, Lahore, in December–January to people who showed interest in the exhibits that were put up at our stalls. Up-to-date information about cotton legislation, for which the Committee was responsible, on the work of the Technological Laboratory and the Institute of Plant Industry aroused much interest. The chapters on the Committee's schemes in the Punjab, the United Provinces, Sind and Central India gave brief but sufficient knowledge of the Committee's activities in improving cotton in these tracts. The bulletin also included a Note on research students and the fumigation of cotton.

Leaflets.

The following leaflet was published in English and Marathi :—

"Some problems of cotton growing and its rotation crops in Central Provinces and Berar and the work hitherto done on them by the Botanical Section, Nagpur, and at the Akola Farm, under the auspices of the Indian Central Cotton Committee."

The leaflet includes also a description of the marketing of Verum cotton and seed distribution in Central Provinces and Berar.

(2) The following new leaflet was published in English and Gujerati on the subject of the "Improvement of Broach cotton: Research work conducted at the Government Farm, Broach".

(3) The following leaflet was published in English:—

"Cotton Research in the Punjab." It reviewed the studies of various botanical and agricultural problems, the Root Rot Scheme and the Pink Boll-worm Scheme.

The following leaflet was published in Urdu, Marathi and Kanarese:—

"The Hyderabad Botanical Scheme."

Summary Proceedings.

In pursuance of the suggestion of Mr. B. C. Burt at the 27th meeting of the Committee in August 1933, that the Publicity Officer might prepare a summary of the discussions in a little less formal manner for the benefit of members of all Chambers of Commerce, Trade Associations, Co-operative Societies and others, the Summary Proceedings have been published. It is hoped that this readable form of the Summary Proceedings will be of benefit to the people concerned.

Posters.

The Poster "India's Bid for Supremacy in the World's Cotton Markets" continued to be in good demand. At the request of the Indian Government Trade Commissioner, Hamburg, a large number of these posters was sent for display in Germany. Copies were also sent to various British Cotton Trade Organizatic s, which gave these posters nation-wide publicity.

The Publicity and Propaganda Department has been devoting a good deal of attention to the preparation of two new posters in consultation with Provincial Departments of Agriculture concerned. Design for a Sindi poster entitled "It pays to grow cotton in Sind" was prepared, as it was evident that on the Indus Right Bank irrigated by the Barrage Canals, cotton was obtaining a far better premium than either rice or juar. Another design that engaged the attention of the Department was the preparation of a poster for stimulating interest in the extension of "Jayawant" in preference to local Kumpta. These posters will be displayed in suitable manner as soon as arrangements for printing the same, which are now in hand, are complete.

Indian Empire Exhibition, Lahore.

The Publicity and Propaganda Department participated in the Indian Empire Exhibition held at Lahore during December 1933 and January 1934, with the object of placing before the public the panorama of the country's trade, industry and commerce. The very fact that no less than 900 stalls gathered together all sorts of exhibits — the most prominent among them being those of the Agricultural Department, Punjab, is enough to give an idea of the magnitude of the undertaking.

Two stalls were hired by the Publicity and Propaganda Department of the Committee for the purpose of displaying improved types of Punjab and other cottons, yarns, etc.

That the Exhibition provided an excellent opportunity for educative w ork and served a useful purpose in stimulating interest in cotton in all its aspects, through lectures, talks, holding meetings, interesting intelligence in the problems of cotton in the Punjab and how those problems were being solved by collaboration between the Provincial Department of Agriculture and the Indian Central Cotton Committee, and by several other means which proved conducive to the better understanding of position of raw cotton in India was abundantly manifest. Exhibits consisted of (*i*) Impoved Punjab American and *Deshi* cottons, (*ii*) Improved types of cotton, yarn, etc., prepared at the Matunga Technological Laboratory, (*iii*) Sind-American, Sind-Egyptian, Sind Sea Island and Sind *Deshi* cottons and seed, together with instructive charts showing particulars of staple, sowing date, and multiplication schemes, (*iv*) Posters in English, Hindi, Urdu, Gurmukhi and Sindhi, giving information regarding India's cotton trade, (*v*) Art photographs showing the storing and marketing of cotton, (*vi*) The Baer Sorter, Balls Sorter and O'nell's Hair Tester for demonstrating how the staple length, percentage of fibres and strength of fibre respectively are determined (demonstrations were given by a technological assistant whose services were kindly lent by the Director, Technological Laboratory, Matunga), (*vii*) Two Jenkins' Clod-Crushers recommended for use in Sind.

The demonstrations mentioned under (*vi*) were a special feature of our stall and received the greatest interest and attention. These together with our neatly arranged exhibits drew multitude of people, growers, traders and manufacturers and were the subject of favourable comments.

A special brochure reviewing the achievements of the Committee's schemes in northern India was freely distributed to interested visitors.

In addition to trade and other enquiries emanating from firms and individuals wishing to establish contacts for the sale and purchase of cotton, we gave all assistance to growers and merchants with a view to stimulating demand for Indian cotton.

Other Exhibitions and Demonstrations.

Publicity material in English and Marathi was forwarded to the Deputy Director of Agriculture, Western Circle, Amraoti. The Deputy Director arranged practical demonstrations all over the Berar districts and many batches of cultivators and others interested in cotton witnessed these demonstrations. Very effective publicity was thus obtained.

Similarly a quantity of posters, bulletins, leaflets and folders in English, Hindi and Urdu was despatched to the Extension Officer of the Institute of Plant Industry, for distribution at the Agricultural Exhibition which he organized in Bharatpur State.

Quantities of publicity material were likewise sent to various Directors of Agriculture, the Chief Agricultural Officer in Sind and the Director of the Institute of Plant Industry for distribution. The Publicity Officer found it difficult to cope with the damand for posters and other material. It is hoped in due course, when fresh stock is printed, to comply with the demand.

Enquiries.

A large number of enquiries were made from the Publicity Department of the Committee from this country as well as from abroad, from Government institutions, trade associations and private concernes. The Indian Cotton Enquiry Committee (Manchester) sought our co-operation extensively for investigations into the technical and marketing problems involved in connection with the improvement and export of Indian cotton. In addition, the Department continued to supply information in response to several enquiries received from the British Cotton Growing Association, Baghdad (Iraq). In India, among other places, enquiries were received from Nawanagar State (general information and plant pullers), Ahmedabad (technological) Allanmyo, Burma (plant pullers), Bombay (heat treatment in control measures, for Pink Boll-Worm in United Provinces), Agra (technological), Japanese firms in Bombay (general information regarding Verum cotton etc.), Khar (marketing of cotton, diseases etc.), Ujjain (adulteration of cotton, control measures against Boll-Worm and plant pullers), Lahore (Institute of Plant Industry).

Tours.

At the invitation of the Chief Agricultural Officer in Sind, the Publicity Officer attended the meeting of the Provincial Board of Agriculture on 26th October 1933 which was presided over by the Commissioner in Sind. Among the subjects discussed were propaganda and publicity methods. By request the Publicity Officer gave his views on the methods by which the Department of Agriculture could exhibit and advertise the agricultural products of Sind—including cotton, at large railway stations which would help towards the general advancement of the interests of agriculturists and buyers in Sind. The Publicity Officer took the opportunity of this visit to Sind to exchange views with the Chief Agricultural Officer in Sind regarding the Indian Central Cotton Committee's Physiological and Seed Distribution Schemes in Sind.

The Publicity Officer attended also the 4th meeting of the Sind Cotton Committee held at Agricultural Research Station, Sakrand, on the 3rd December at the request of the Chief Agricultural Officer in Sind, and was able to offer useful opinions on the question of the utilization of zemindari lands for the extension of agricultural improvements as propaganda demonstrations to the cultivators.

The Publicity Officer also visited Lahore and Lyallpur to make necessary arrangements for giving publicity to the Committee's work in Northern India at the Indian Empire Exhibition and toured through the Faridkot, Nabha, Jind, Patiala and Bahawalpur States to impress upon the owners of cotton pressing factories the desirability of submitting weekly pressing returns showing the total number of bales of cotton pressed during the preceding week and from the commencement of the season to the end of the week, regularly and punctually.

The Indian Central Cotton Committee is destined to play an even more important rôle in the immediate future than in the past, following on the Ottawa Agreement, and in view of the many developments now taking place in the cotton industry. If the Publicity work of the Committee continues to be maintained at the same standard as hitherto and further activities appropriate to the development of events are taken up, there can be no doubt it will be of the greatest value to all branches of the industry and especially to cultivators, whose interest will always be its chief concern.

APPENDIX III.

SUBJECT 17.—*Technological Research—Progress Report of the Director, Technological Laboratory.*

SUMMARY OF PROGRESS REPORT (No. 21) OF THE DIRECTOR, TECHNOLOGICAL LABORATORY.

INTRODUCTION.

The present report deals with the work done at the Laboratory between the 1st June 1933 and the 31st October 1933. Among the more salient features of this work mention may be made of the completion of the tests on 80 samples of 1027 A.L.F. and Selection 1A and the satisfactory conclusion of the application for patenting in the Committee's name the new Stapling Apparatus recently perfected at the Laboratory. The former tests were carried out on samples of 1027 A.L.F. and Selection 1A cottons grown in the Navsari and Surat Districts with a view to obtaining reliable information regarding their spinning performance which may be of use to the Committee in deciding upon its Cotton Policy in Gujerat. The application for patenting the new Stapling Apparatus was made in accordance with the decision of the Committee and information has recently been received that the application has been found in order and that the granting of patent may be expected at an early date. Arrangements will now be made for the manufacture of this apparatus on a commercial scale with a view to placing it in the market. The work of the Laboratory will now be described under the following heads :—

I. Spinning Laboratory.
II. Research Laboratory.
III. Moisture Testing Section.
IV. Publications.
V. General.

I. SPINNING LABORATORY.

The following classified table gives, in a summary form, the distribution of samples received for tests during the period under review together with the figures for the corresponding period of last year :—

TABLE I.

——	1st June 1933 to 31st October 1933.	1st June 1932 to 31st October 1932.
Agricultural Departments	103	113
Standard cottons	1	1
Trade samples	29	23
Fibre test samples	46	34
Yarn test samples	5	40
Special test samples	19	8
Total ..	203	219

It will be seen that the samples received for trade tests, fibre tests and special tests show an increase over the last year's figures, while those received from the Agricultural Departments and for yarn tests show a decrease. The total number of samples received during the period under review is a little less than that for the corresponding period of last year. The small decrease in the number of agricultural samples is due to the fact

that, as mentioned in my Progress Report No. 20, a very large number of agricultural samples had already been received during the first seven months of this year. Accordingly, if we take the total number of samples for the current year, it shows an increase of 22 per cent. over the last year. The decrease in the number of samples for yarn tests may be due to the imposition of fees decided upon by the Committee sometime ago though it does not seem to have affected the number of samples received either for fibre tests or spinning tests.

The number and distribution of samples, lots and counts spun during the period under review are given in the following table together with the figures for the corresponding period of last year :—

TABLE II.

	Samples.		Lots.		Counts.	
	1st June 1933 to 31st October 1933.	1st June 1932 to 31st October 1932.	1st June 1933 to 31st October 1933.	1st June 1932 to 31st October 1932.	1st June 1933 to 31st October 1933.	1st June 1932 to 31st October 1932.
Bombay ..	76	59	76	59	223	172
Punjab ..	....	16	....	16	....	48
United Provinces ..	....	5	....	5	....	10
Madras ..	26	11	26	12	77	41
Central Provinces ..	....	....	....	....	....	....
Miscellaneous ..	37	32	37	32	111	95
Total ..	139	123	139	124	411	366
Standard ..	1	....	2	....	12	....
Trade Tests ..	21	31	21	35	48	97
Technological Tests.	24	53	24	54	64	82
Grand Total ..	185	207	186	213	535	545

It will be seen that the total number of samples and lots spun during the period under review show a small decrease over the figures for the corresponding period of last year while the total number of counts spun is practically the same. The results of tests carried out on the abovementioned samples were as usual embodied in spinning test, fibre test and yarn test reports, and table III shows the number of reports of each kind issued during the period under review together with the figures for the corresponding period of last year :—

TABLE III.

	1st June 1933 to 31st October 1933.	1st June 1932 to 31st October 1932.
Spinning Test Reports	45	41
Fibre Test Reports	18	7
Yarn Test Reports	2	2
Total ..	65	50

It will be seen that more than twice as many fibre test reports were issued during the period under review as in the corresponding period of last year while the number of spinning test reports increased by 10 per cent. The total number of reports issued during

the period under review shows an increase of about 30 per cent. over the number for the corresponding period of last year.

Agricultural Samples.—From among the samples received or tested during this period mention may be made of the following which are of special agricultural importance :—

(1) *Cotton Policy in Gujerat.*—Last year tests were made on 20 samples each of 1027 A.L.F. and Selection 1A grown at Surat. This year these tests have been extended to 40 samples of these two cottons grown in the Surat District and another 40 samples grown in the Navsari District in Baroda State. Thus, during the last two years, tests have been made on 120 samples of these two cottons grown in the villages of Surat and Navsari. The results of these tests when considered collectively along with the figures for the yield, ginning outturn and the grader's valuation should prove highly useful to the Committee in deciding as to which of these two cottons would normally give the best monetary return to the grower.

(2) *Irrigation Experiments.*—As mentioned in my last Progress Report, samples of cottons have been received from Lyallpur, Sakrand, Bikaner and Coimbatore which were grown under as nearly the same conditions as possible but with different amounts of irrigation. The two objects of tests on these samples are first to find out the particular irrigation treatment which would give the highest yield combined with the best spinning test results and secondly, to elicit information as regards the effect of different irrigations on the fibre properties and the spinning performance of a cotton. Hitherto tests on samples received from Lyallpur have been completed and a Spinning Test Report has been issued. The results of these tests show that a slight modification of the practice followed by a local Zamindar results in a very substantial increase in the yield of cotton, that the mean fibre-length shows a slight tendency to diminish as the amount of water applied to 4F is reduced, that the fibre-weight per inch is significantly correlated in a positive manner with the amount of irrigation and that the spinning performance of 4F is not affected to a large extent by the amount of water applied to it though the particular sample which received the greatest irrigation gave a good performance as compared with the others. It has not been found possible so far to test the samples received from Bikaner, Sakrand and Coimbatore, but it is hoped that when these tests are completed, more valuable information will be obtained and if the experiments are continued for another few years, a great deal of light will be thrown on the relationship between the yield, fibre properties and spinning performance of a cotton and the amount of irrigation given to the crop.

(3) During the period under review spinning test reports have been issued on 40 samples of cotton received from the Director, Institute of Plant Industry, Indore. These samples were grown in Central India and Rajputana with the double object of finding out, on the one hand, the particular strains of Malvi cotton which are best suited for cultivation in these areas and the possibility or otherwise of growing, on a profitable basis, some imported types in these areas.

Fibre Tests.—The tests on samples of fair average quality of A. R. Kampala, A. R. Busoga and A. R. Jinja cottons have been undertaken for some time past at the request of the East India Cotton Association with a view to helping the Association in laying down standards of length for these three types which are being used in large quantities by the Indian mills. In April 1933 a report embodying the results of tests carried out on 39 samples was forwarded to the East India Cotton Association. It was considered by the Special Sub-Committee on African Cottons on the 28th June 1933. The Special Sub-Committee arrived at certain tentative conclusions as regards the standards of length for these cottons and recommended that as tests on samples of the 1932–33 crop have already been started these may be continued to the end of the current season. They also kindly expressed their appreciation of the help given by the Laboratory as will be seen from the following extract of a letter received from the Secretary of the East India Cotton Association :—

"The Committee placed on record their sense of appreciation of the very useful work done by the Technological Laboratory and especially the Director, Dr. Ahmad, in connection with the experimental tests on Uganda cottons."

(*b*) *Indore Samples.*—Samples of Cambodia and Malvi cottons sown before monsoon on irrigation and irrigated after rains showed an improvement in fibre-length of 5–10 per cent. as compared with those grown under *barani* conditions in the case of Cambodia cottons while no such improvement was observed in the case of Malvi cotton. Tests on samples of 289F grown at Indore showed that the low fibre-weights which were observed for these cottons were mainly due to the presence of a large percentage of immature fibres and that heavy irrigation in addition to improving the staple length helped to reduce immaturity.

(c) *Parbhani cottons.*—As in the past, fibre tests have been continued on several strains received from Parbhani with a view to helping the Cotton Research Botanist, Parbhani, in selecting the promising strains for further field trials.

Testing of samples for private mills.—It will be recalled that at its meeting held on 1st August 1932, the Indian Central Cotton Committee laid down certain fees for testing samples received from mills and individuals in their private capacity. The scale of fees was later modified in a meeting of the Standing Finance Sub-Committee held on 13th March 1933. Since 1st January 1933, when these charges came into force 40 samples have been tested under this head. Of these six samples were subjected to spinning tests, 25 of fibre tests and the remaining nine to yarn tests. The total income derived from these tests is Rs. 567-8-0.

Trade Samples.—These samples are being tested at the Technological Laboratory in accordance with the arrangement entered into between the Indian Central Cotton Committee on the one hand, the East India Cotton Association, Bombay, the Millowners' Association, Bombay and the Ahmedabad Millowners' Association on the other. During the period under review 22 samples were received for tests and the results of spinning tests on these samples were embodied in ten Technological Circulars which also contained the results of tests carried out on the same growths during the previous seasons.

In addition to these, tests on samples of special interest to the trade and industry have been made during the period under review. Among these, mention may be made of the following :—

(1) *Tests on Damped and Dry Cottons.*—Bales of Amraoti cotton pressed with different amounts of humidification have been kindly placed at the disposal of the Laboratory by Messrs. Volkart Brothers, Bombay, to whom my best thanks are due. Samples drawn from these bales at intervals of about 5 months are subjected to the usual spinning tests. Only two series of tests have been made so far and it is proposed to continue these tests during the next year.

(2) *Deterioration of cotton stored in open plinths at Karachi.*—This investigation has been undertaken at the request of the Karachi Cotton Association with a view to finding out the extent to which cotton bales stacked in open plinths deteriorate in comparison with those stored inside a shed. Tests have already been made on two series of samples drawn from these bales and will be continued during the next year when their results will be summarised in the Progress Report.

(3) *Identification of cottons.*—Small samples of cotton were supplied by the Collector of Salt Revenue, Bombay. These were drawn from bales landed at a Kathiawar port and the Collector of Salt Revenue was anxious to find out whether any American cotton was being imported, under a false description, through this port with a view to avoiding fumigation charges. Detailed fibre tests were made on these samples and a report embodying the results of these tests was sent to the officer concerned.

(4) *Tests on samples drawn from Calender Bowl.*—These samples were submitted by a local mill which experienced some difficulty with one of their Calendering Machines. The object of the test was to find out whether the cotton used in the Bowls was of the same type as the sample supplied by the manufacturers of the machine or a different type had been substituted for it. Comparative tests were made on these samples and a report embodying the results was sent to the mill concerned.

Technological samples.—Owing to the fact that practically the whole of the period under review was taken up with the testing of agricultural samples, much headway could not be made in the investigation of technological problems. The period was, however, utilised in writing up the accounts of investigations which had been completed. Among these mention may be made of a Bulletin on the effect of manurial treatment on Cambodia Co. 1 cotton. The question of using artificial manures, especially where the soil fertility is low, is of very great importance to the cotton grower and the object of this investigation was to find out the type of manure and the amount of dressing which would give the best results as regards yield and spinning performance with Cambodia cotton. In another bulletin the results of experiments performed with a view to finding out the relationship between the feel and the wax content of a cotton have been discussed and the Bulletin has been sent out for publication. The wax content of a cotton, though small as compared with the other constituents of the fibre, plays an important part in the spinning, bleaching, dyeing and scouring processes. It is usually estimated by the Grader by feeling the cotton and the object of this investigation was to ascertain whether any relationship exists between the feel as estimated by the Grader and the wax content as found by chemical methods.

It will be remembered that one of the main problems of the Laboratory in the past has been the derivation of a formula for the prediction of the spinning value of a cotton from its fibre-properties. Such a formula provided it holds accurately would dispense with the necessity of performing spinning tests on each and every sample and would enable the cotton breeders to gauge the spinning performance of their new strains from an examination of a handful of lint. The elaborate tests on Standard Indian Cottons were carried out, among other reasons, with this object in view during the past 8 seasons. The results of these tests have recently been discussed from this point of view by Dr. A. J. Turner in a Bulletin which should prove of great value both to the Technologist and the Cotton Breeders. A summary of this Bulletin will be found under the head "Publications".

II. Research Laboratory.

Fibre Testing Section.—This Section has been fully occupied with the testing of the samples received by the Laboratory for spinning tests, fibre tests and special trade tests and such technological samples on which fibre tests were regarded necessary.

Mr. Hari Rao has continued to supervise the work of this Section and has, in addition, pushed on with his investigation on the effect of twist on the strength of cotton fibre. After having completed tests on a short and a long staple cotton, which gave some very interesting results, Mr. Hari Rao is now carrying on tests on a medium staple cotton.

Physics Section.—In collaboration with Mr. Richardson, *Mr. D. F. Kapadia* is continuing his investigation on the carding problems to which a reference has been made in my previous Progress Reports. The experimental part of this investigation has now been nearly completed and Mr. Kapadia is now engaged in making the few remaining tests and analysing the results prior to their publication in the form of Technological Bulletins.

Mr. R. S. Koshal who was granted study leave out of India from the 2nd May 1932 to 1st May 1933 combined with privilege leave from the 2nd May 1933 to 25th May 1933 returned to duty on the 26th May 1933. During the period of his study leave he worked at the Rothamsted Experimental Station under Dr. R. A. Fisher. I am glad to say that Mr. Koshal made very good use of his time as shown by the satisfactory reports of his work received from Dr. Fisher. During his stay at Rothamsted Mr. Koshal tackled the following two statistical problems :—

(1) Application of the method of maximum likelihood to the improvement of curves fitted by the method of moments, (2) Effect of rainfall and temperature on percolation through drain gauges. The results of his investigation on the first problem have already been published in the Journal of the Royal Statistical Society while an account of his work on the second problem is in the press. Since his return to the Laboratory from study leave Mr. Koshal has been engaged on the study of the characteristics of fluorescent light given out by the exotic and indigenous Indian cottons when irradiated by *ultra*-violet rays. This work is in progress.

After making the final tests on the new Stapling Apparatus *Mr. C. Nanjundayya* completed his investigation on the relationship between the strength and length grade of cotton fibre. He has now undertaken a study of the absorption of moisture by cotton under different degrees of compression, and the rates of absorption of moisture by different Indian varieties. These two problems have been indicated as being important by the results of the investigation on the variation in the weight of a cotton bale and the moisture content of a bale of cotton which was completed sometime ago at the Technological Laboratory and the results of which have been described in Technological Bulletin, Series A, No. 23. This work is in progress.

Dr. R. N. Mathur has continued his investigation on the density of fibre of different Indian cottons with a view to eliciting information as regards the relationship between the ribbon-width of cotton fibre and its other properties. He has now completed his tests on eight Indian cottons and is extending them to some more cottons.

Chemistry Section.—As in the past *Mr. D. L. Sen* has continued to carry out moisture tests on samples of cottons drawn from commercial bales of different trade descriptions. An account of the work done in this Section will be found under the head 'Moisture Testing Section'. Besides this, Mr. D. L. Sen, after completing the analysis of results obtained in connection with the investigations on the effect of manurial treatment on Cambodia cotton and the relationship between the feel and wax content of cotton, has undertaken an investigation on the absorption of different dyes by the Standard Indian Cottons. This work is in progress.

Microscopy Section.—Among the fibre-properties of a cotton, maturity is now regarded as occupying an important position. This fact is recognised by most Cotton Breeders

who specially ask for maturity tests to be performed on the samples submitted by them. These maturity tests have in all cases been carried out by *Mr. Gulati*. In addition to this, Mr. Gulati has been engaged in writing up an account of his experiments on the relationship between the neppiness of the yarn spun from a cotton and the maturity of its hair and the relationship between strength and maturity of cotton hair. A bulletin embodying the results of this investigation is in the course of preparation. In addition to this, Mr. Gulati is engaged on making measurement on the growth and sub-division of epidermic cells on young ovules. This work is in progress.

III. Moisture Testing Section.

It was stated in my last Progress Report that the first stage of the work of the Moisture Testing Section was brought to a close by the completion of tests on specially pressed bales and bales which are ordinarily received for trade purposes in Bombay. The available results were placed before a Sub-Committee on 20th November 1933. After a thorough discussion it was decided that, as in the case of several descriptions of cottons sufficient data was not available, these tests should be continued for sometime more.

IV. Publications.

The following is the list of the Technological Bulletins and Circulars issued during the period under review :—

Bulletins.

(1) Technological Bulletin, Series A, No. 23 " Variation in the Moisture Content of Baled Indian Cotton with Atmospheric Humidity " by Nazir Ahmad, M.Sc., Ph.D.

(2) Technological Bulletin, Series A, No. 24, " Technological Reports on Standard Indian Cottons, 1933 " by Nazir Ahmad, M.Sc., Ph.D.

(3) Technological Bulletin, Series A, No. 25, " Testing of Indian Cottons for Quality at the Laboratory " by Nazir Ahmad, M.Sc., Ph.D.

(4) Technological Bulletin, Series B, No. 17, " The Foundations of Yarn-Strength and Yarn-Extensions : Part V. The Prediction of the Spinning Value of a Cotton from its Fibre-Properties " by A. J. Turner, M.A., D.Sc., and V. Venkataraman, M.A.

Circulars. Nos. 100 to 109.

V. General.

Visit of His Excellency the Viceroy.—His Excellency the Viceroy honoured the Laboratory by a visit on the 14th August 1933. His Excellency was received at the entrance by Mr. S. D. Saklatvala, Mr. P. H. Rama Reddi and the writer. Invitations had previously been issued to the members of the Standing Finance Sub-Committee and Technological Research Sub-Committee and Mr. S. D. Saklatvala introduced the members present on the occasion to His Excellency. As the party inspected the different sections of the Laboratory, His Excellency put numerous questions regarding the various researches in progress at the Laboratory such as the analysis of cotton by ultra-violet light, the determination of fibre maturity, the wax content, etc. He evinced keen interest in the new method evolved at the Laboratory for the determination of staple length and fibre-weight of cotton. The party then proceeded to the Spinning and the Yarn Testing Sections where the various processes in the manufacture of carded and combed yarn from Indian cottons and the determination of their various characteristics were demonstrated to His Excellency who showed himself fully alive to the welfare of the cotton trade and industry by making enquiries about the improved types developed as a result of the efforts of the Indian Central Cotton Committee, especially those under trial in Sind. His Excellency was pleased to express his appreciation of the work done at the Laboratory and as a memento of his visit presented signed photographs of himself and Lady Willingdon to the Laboratory.

Purchase of two plots for extension of the Laboratory.—In view of the manner in which the work of the Laboratory has increased during the last few years, several rooms of the Laboratory have become severely over-crowded and the need for extension has been felt in more than one direction. In addition to this, it has been felt that if the Laboratory is to continue to serve the trade and industry in the manner in which it has done in the past, it is necessary that arrangements should be made for testing other qualities of cotton besides spinning, such as dyeing, bleaching, sizing, etc. It was also felt that an impetus to the use of Indian cottons would be given if arrangements could be made at

the Laboratory for preparing samples of cloth from these cottons embodying such fancy designs and contrast effects as may be seen in fabrics imported from other countries and for studying the influence of modern finishing processes on cloths made from Indian cottons. Since the space available at present is insufficient for extension along these lines, the Standing Finance Sub-Committee was approached with the request kindly to sanction a sum sufficient for the purchase of the two adjoining plots. This necessary sum was sanctioned by the Standing Finance Sub-Committee on the 16th October 1933 and arrangements are afoot to acquire these two plots.

Equipment.—The equipment of the Laboratory has been strengthened by the purchase of the following machinery and apparatus :—

Machinery.—A Jack Roving Frame with 56 spindles manufactured by Messrs. Tweedales and Smalley. The amount for the purchase of this Roving Frame was sanctioned by the Committee at its meeting held on 3rd February 1933. The Frame has been received and erected and a 4 H. P. motor to run the frame as well as the gins recently installed at the Laboratory has also been erected.

Apparatus.—Heraus Mercury Quartz Lamp for ultra-violet radiation.

Staff.—In order to cope with the large increase in the number of samples received during the year 4 temporary posts of Junior Testers were created, one for a period of 3 months and three for a period of 4 months. Mr. C. T. Korula, L.T.M., was appointed to the first post, and Messrs. A. B. Pathan, R. H. Kutar, L.T.M., and R. Hurry, B.Sc., were appointed to the remaining three posts.

ACKNOWLEDGMENTS.

My thanks are due to the members of the research, testing and office staff of the Laboratory whose valuable assistance and loyal co-operation made it possible for me to complete the work described in this Report.

(Signed) NAZIR AHMAD,
Director,
Technological Laboratory.

Dated the 28th December 1933.

APPENDIX IV.

SUBJECT 28.—*Report of the Agricultural Research Sub-Committee.*

A. REPORT OF THE AGRICULTURAL RESEARCH SUB-COMMITTEE ON NEW AGRICULTURAL RESEARCH SCHEMES.

(1) *Central Provinces and Berar Entomological Scheme (No. 19).*—The Sub-Committee recommends the sanction of this scheme for a period of two years with a view to ascertaining if the results obtained from the Surat Entomological Research Scheme are applicable to Central Provinces conditions.

As to the assistant to be employed on this scheme, the Sub-Committee is of opinion that an attempt should be made to secure the services of one of the ex-employees of the Surat scheme on a suitable pay. The estimated cost of the scheme would be modified to this extent.

(2) *Scheme for survey of the disease of malformation in Punjab-American Cottons (No. 20).*—The Sub-Committee recommends that the scheme might be adopted at the estimated cost of Rs. 2,674. It was also decided that the Secretary should write to all Directors of Agriculture for any information, available with them, upon this or similar malformation disease in cotton.

(3) *Scheme for cotton Jassid investigation in the Punjab (No. 21).*—The Sub-Committee considers that it would be more profitable to investigate this problem from the botanical aspect rather than from the entomological aspect. It is therefore recommended that the scheme should be referred back to the Director of Agriculture, Punjab, for modification.

(4) *Scheme for Boll-worm Clean-up demonstration in Baroda (No. 22).*—The Sub-Committee recommends that the scheme may be referred back to the Director of Agriculture, Baroda, for discussing it with the Director of Agriculture, Bombay Presidency, in the light of the experience gained from the clean-up scheme in Gujerat, and re-submitting it for consideration at the next meeting of the Sub-Committee.

B. Report of the Agricultural Research Sub-Committee on New Seed Distribution and Extension Schemes.

(1) *Scheme for the propagation of C-402 in the Hardoi and neighbouring districts of Lucknow and Sitapur (No. 24).*

The Sub-Committee recommends that this scheme be sanctioned for five years. The Sub-Committee however suggests that item 5 (c), in the estimate of the scheme, shown at page 4 of the note, be raised to Rs. 1,200. If this suggestion is accepted, the total cost of the scheme would go up to Rs. 45,800 against Rs. 43,800 asked for.

The Sub-Committee is not in favour of granting any financial backing to the Cotton Production and Sale Society, Belgram, as proposed in part II of the scheme received from the Director of Agriculture.

(2) *Wagad Seed Distribution and Extension Scheme (No. 25).*

In view of the partial failure this season of the crop raised from selfed seed, the Sub-Committee recommends that the scheme be sanctioned for six years from the 1st April 1934 instead of five years. The additional cost on this account, viz., Rs. 5,360, will raise the total cost of the scheme to Rs. 1,23,315.

(3) *Scheme for the multiplication and supply of pure Banilla cotton seed on the Deccan Canals (No. 26).*

This scheme is practically self-supporting, but the Committee has to meet, in the first instance, the operational expenses which will later on be recouped by the sale of cotton and ground nut. The Sub-Committee recommends that this scheme be sanctioned for a period of five years commencing from March 1934 at a total estimated expenditure of Rs. 23,800.

(4) *Surat Cotton Seed Distribution and Extension Scheme (No. 27).*

The Sub-Committee recommends the adoption of this scheme subject to the condition that the full Committee's decision on the question of the cotton policy in Gujerat is in favour of 1A L. B.

(5) *Scheme for the extension of long-staple cotton in the Central Provinces and Berar (No. 35).*

The Sub-Committee recommends that sanction may be accorded to this scheme. The total cost is Rs. 86,298 spread over a period of three years.

C. Report of the Agricultural Research Sub-Committee on Extensions of Old Schemes.

(1) *Punjab White Fly Scheme.*

The Sub-Committee considered the proposals for an extension of this scheme by three years submitted by the Director of Agriculture, Punjab, and approved, with modifications, the programme of work proposed by the Director of Agriculture. In view of the restricted programme, the Sub-Committee recommends the extension of the scheme for two years only, at an estimated cost of Rs. 10,709 in 1934–35, and Rs. 10,878 in 1935–36, the difference between the Sub-Committee's recommendations and the Director's proposals being the omission of the provision for the Field Assistant on Rs. 200—10—220.

(2) *Punjab Spraying Trials Scheme.*

The Sub-Committee recommends the extension of this scheme by one year at an estimated additional cost of Rs. 1,250. The area proposed to be treated should be, as now, 3,000 acres, but located in four different centres. The crop should be sprayed at different times. Also small scale experiments should be undertaken with different insecticides.

(3) *Seed Distribution and Extension Scheme, Tiruppur—Pay of Business Manager—Proposed extension of appointment of and provision of staff for.*

The Sub-Committee considered the proposals of the Director of Agriculture, Madras, for extending, till the end of the Co. 2 Scheme, viz., September 1937, the appointment of the Business Manager which would ordinarily expire in May 1936 and for providing him with clerical assistance, office accommodation, etc. The Sub-Committee thinks it unnecessary to examine at this stage the question of the extension of the Business Manager's appointment and recommends that he may be provided with clerical assistance, etc. till the period of his present appointment terminates.

D. Report of the Agricultural Research Sub-Committee on Research Students.

(1) *Progress Report of Mr. Sant Singh Verma.*

The Sub-Committee considered and approved the progress report submitted by Mr. Sant Singh Verma for the quarter ending September 1933. The Sub-Committee recommends that in future only half-yearly progress reports need be submitted by the students placed under the control of the High Commissioner for India.

(2) *Programme of work of Mr. S. N. Venkataramana Ayyar.*

The Sub-Committee also considered and approved the programme of work for Mr. S. N. Venkataramana Ayyar drawn up by Professor P. C. Mahalonobis for training in statistical methods under him. The question, whether Mr. Venkataraman should rejoin his department or continue his work at Calcutta during the absence of Professor Mahalonobis on leave from April to August 1934, should be decided by the Standing Finance Sub-Committee.

Final Reports of Research Students.

The Sub-Committee considered and approved the final reports submitted by the following research students :—

(1) Bhai Santok Singh Jaggi (Punjab—Cotton Marketing and Economics) on :—

(*a*) Effect of mixing *Desi* and American cottons on the premium paid for American over *Desi* cotton in the Lyallpur market

and

Relation between the prices of Broach cotton in the Bombay market and the prices of American cotton in the Lyallpur market.

(*b*) Causes of fluctuation of area under cotton in the Canal Colonies of the Punjab.

(*c*) Effect of ginning and pressing factories pools on the local prices of *kapas*.

(*d*) Study of agricultural conditions under which *Desi* and American cottons are grown in the Lyallpur District.

(2) Mr. S. V. Doraiswamy Ayyar (Madras—Cotton Marketing and Economics) on :—

The Finance and Sowings of cotton in the Tiruppur tract, Season 1932, and

The Finance and Marketing of cotton in the Tiruppur tract, Season 1933.

(3) Mr. K. R. Dube (Central Provinces—Cotton Marketing and Economics) on :—

The cost of cultivation of cotton and its rotation crops.

Foreign Scholarship.

The Sub-Committee recommends the application of Mr. Shama Iyengar for a training grant. The papers are attached*. A grant of Rs. 6,000 is required.

Future employment of Messrs. B. N. Bhargava and Madanlal Bhatia.

The term of scholarship of both these students will terminate in March 1934. The Sub-Committee notes that there are no suitable posts at present in view in the provinces to which they could be appointed. The Directors of Agriculture of the United Provinces and the Punjab have, however, promised to consider the cases of these students later.

Award of Research Studentships in 1934.

The Sub-Committee recommends that a research studentship should be granted in Genetics during this year. As usual applications should be invited by advertisement from candidates who have either undergone a post-graduate course in Genetics or had practical experience of genetical work for at least two years.

E. General.

(1) *Final Report on the Dharwar Cotton Wilt Research Scheme.*—In accordance with the recommendations made by the Sub-Committee at its last meeting, Mr. G. S. Kulkarni, the author of the report, re-examined the passages in the report relating to (1) the

* Not printed.

decrease of wilt with rise in temperature (page 25 of the report), (2) the method of determination of pH value (page 26 *ibid*) and (3) the absence of evidence for the conclusion that the fungus penetrated the roots purely by mechanical pressure (page 46 *ibid*). In view of the explanation offered by Mr. Kulkarni, the Sub-Committee recommends that in item 1, the words "It may be stated" should be replaced by a less definite phrase such as "There is some evidence for....."

It is also recommended that the report should be published in the Indian Journal of Agricultural Science subject to any abbreviation deemed desirable by the Editorial Committee of that Journal whose attention may be drawn to the absence of evidence for the statement made on page 46 of the report, and to the lack of clarity in the penultimate sentence of the extract from the "modified report" given on page 2 of the subject paper.

(2) *Dharwar Cotton Wilt Research Scheme—Experiments on the hot water treatment of seed for control of cotton wilt.*—These experiments are designed to test the possibility of controlling wilt by killing the fungus contained in seed without killing the seed itself. The thermal death-point of the fungus is found to be near 60° C, and at the same temperature seed soaked in water also dies. The latter may be due to the thorough soaking of the seed. Though heat-treated, dry seed shows less death rate at 60° C, it now remains to be seen how far the seed infection can be killed by heat-treatment of dry seed. The results of these observations will be available by September next.

(3) *Madras Pempheres and Physiological Work—Programme of Biochemical work.*—The programme of the bio-chemical work submitted by Dr. Kasinathan, the Bio-Chemist, who has now returned after his training in England, was examined by the Sub-Committee, and accepted with modifications. It was also decided to request the Director of Agriculture to give the Bio-Chemist facilities to work in the Laboratory of the Agricultural Chemist, and to recommend only a grant of Rs. 1,000 for special apparatus required immediately.

(4) *Central Provinces Botanical Research Scheme—Extension of—Pay of Officer-in-Charge.*—The Sub-Committee recommends that it would be advantageous to have Mr. D. N. Mahta solely for cotton work, and therefore the proposal of the Central Provinces Government might be accepted, provided a Second Economic Botanist is appointed by the Local Government.

(5) *Cotton Survey Scheme in Rohilkhand and Bundelkhand, United Provinces—Proposed grant of a personal allowance to the Economic Botanist to Government, United Provinces.*—The Sub-Committee considered the application of Rai Saheb Thakur Ram Prasad Singh, Economic Botanist to Government, United Provinces, for the grant of a personal allowance of Rs. 200 p.m. for supervising the work in the above scheme. The Sub-Committee strongly recommends that the practice of granting personal allowances to officers serving under Local Governments should be discontinued. On the same principle the Sub-Committee is unable to recommend the allowance asked for by the Rai Saheb.

(6) *Sind Physiological Research Scheme—Pay of staff during extension of the Scheme.*—The Sub-Committee notes with satisfaction that the recommendation of the Indian Central Cotton Committee in regard to the pay of the staff of the Sind Physiological Research Scheme has been accepted by the Government of Bombay with slight modifications.

(7) *Hubli and Gadag Seed Distribution and Extension Schemes.*—The Sub-Committee considered a representation from the Hubli and Gadag Societies protesting against the recent decision of the Standing Finance Sub-Committee to offer these Societies a new basis for the grant of subsidy, viz., interest on capital outlay not exceeding 5 per cent. and guarantee against loss up to a maximum of 10 per cent. of capital outlay, as against the present basis of interest at 5 per cent. on the money invested in the purchase of seed, and guarantee against loss in seed transactions up to a maximum of Rs. 5,000 provided sufficient seed for 2 lakhs of acres is stocked by the Societies. The recommendations of the Director of Agriculture, Bombay Presidency, on this representation are that the Societies should either accept the new basis or continue the schemes on their present basis until the end of their sanctioned periods. The Sub-Committee agrees with the views of the Director of Agriculture, and recommends them for acceptance.

F. Report of the Agricultural Research Sub-Committee regarding the order in which sanctioned schemes should commence operation.

In view of the dwindling reserves of the Committee, and the increasing number of the demands on cotton cess funds for financing agricultural schemes the Agricultural Research Sub-Committee decided to draw up an order of precedence for the schemes sanctioned by the Sub-Committee at this meeting. After a careful examination of the

importance, urgency, and the relative costs of the schemes, the Sub-Committee decided to classify the schemes under three heads :—

I. *Special Schemes*, comprising continuation schemes of existing research and seed extension schemes,

II. *New Research Schemes* consisting of the new agricultural research schemes, and

III. *New Seed Schemes* comprising the new seed distribution and extension schemes sanctioned by the Sub-Committee.

The schemes included in Class I should take precedence of all others, schemes in Class II and Class III following them. It was further decided to arrange the schemes as below to show the order in which those included in each class should be given priority over others in the same class.

CLASS I—SPECIAL SCHEMES.

(1) *Punjab White Fly Scheme.*—Scheme extended for two years from the 1st April 1934. Estimated cost including leave-salary during 1934–35 is Rs. 10,709 and during 1935–36 Rs. 10,878. Of the total estimated cost of Rs. 21,587 a saving of Rs. 5,500 from the grant made for the current period of the scheme is expected. The net amount required is therefore only Rs. 16,087.

(2) *Punjab Spraying Trials Scheme.*—Scheme extended for one year from July 1934. Estimated cost of extension is Rs. 6,590, major part of which can be met from savings from previous grant. The net amount required is Rs. 1,250.

(3) *Seed Distribution and Extension Scheme, Tiruppur.*—The Sub-Committee turned down the proposal to extend the scheme, but agreed to provide clerical assistance, office accommodation, etc., to the Business Manager at an estimated cost of Rs. 3,050 during 1934–35, 1935–36 and 1936–37 (upto the 17th May 1936).

(4) *Surat Seed Distribution and Extension Scheme.*—The scheme submitted by the Director of Agriculture, Bombay Presidency, is for the distribution of 1A L.B. seed, in anticipation of the decision of the Committee in favour of this type of cotton for the Surat tract. Since the Committee has voted in favour of 1027 A.L.F. the scheme becomes an extension of the present 1027 A.L.F. seed distribution scheme. This scheme is therefore extended for a period of five years from April 1934 at an estimated cost of Rs. 66,390.

CLASS II—NEW RESEARCH SCHEMES.

(1) *Scheme for survey of the disease of malformation in Punjab-American cottons.*—Sanctioned for one year from April 1934 at an estimated cost of Rs. 2,674.

(2) *Central Provinces and Berar Entomological Scheme.*—Sanctioned for two years at an average cost of Rs. 2,391 per annum. The cost will however vary according to the pay to be offered to the ex-employee of the Surat Entomological Scheme, who, as recommended by the Sub-Committee, has to be recruited as the assistant.

CLASS III—NEW SEED SCHEMES.

(1) *Deccan Banilla Scheme.*—Though practically self-supporting, the Committee has to meet, in the first instance, the operational expenses. Scheme sanctioned for five years from March 1934 at a total estimated cost of Rs. 23,800.

(2) *Central Provinces and Berar Seed Distribution Scheme.*—Sanctioned for a period of three years at an estimated cost of Rs. 86,298.

(3) *United Provinces C-402 Seed Distribution Scheme.*—Sanctioned for five years at an estimated cost of Rs. 45,800.

(4) *Bombay Wagad Seed Distribution Scheme.*—Sanctioned for six years from April 1934 at an estimated cost of Rs. 1,23,315.

APPENDIX V.

SUBJECT 30.—*Report of the Standing Finance Sub-Committee :—*

(*a*) *Balance Sheet.*
(*b*) *Financial Statement.*
(*c*) *Revised Estimates for 1933–34.*
(*d*) *Budget, 1934–35.*
(*e*) *Auditors' fees.*

Three meetings of the Sub-Committee were held since the last meeting of the Central Cotton Committee.

2. The Sub-Committee reported to the last meeting of the Indian Central Cotton Committee that it had decided to adhere to its previous decision recommending the

appointment of Mr. Mohammad Afzal to the post of Cotton Research Botanist in the Punjab. A letter has since been addressed to the Government of India embodying the views of the Sub-Committee in favour of Mr. Afzal's appointment and the matter is still under the consideration of the Government of India.

3. The Indian Central Cotton Committee at its last meeting held in August 1933 considered the following resolution passed by the Board of Governors, Institute of Plant Industry, at their meeting held on the 28th February 1933 :—

> " That, in the absence of suitable accommodation for the Director of the Institute, and to ensure that such will always be available, the Board requests the Indian Central Cotton Committee to make a special grant to the Institute of Plant Industry of a sum not exceeding Rs. 45,000 to enable a Director's house to be built upon the Institute's leased area, subject to satisfactory arrangement with the Holkar Darbar in regard to compensation to the Indian Central Cotton Committee for the capital value of the buildings, in the event of the Society's dissolution or of the Darbar entering into occupation of the land before the expiry of the 99-year period of the lease."

The Committee after discussing the resolution at some length decided to refer to the Standing Finance Sub-Committee the question of quarters for the Director, Institute of Plant Industry. The Sub-Committee considered the question at two of its meetings and finally decided that at the next meeting of the Board of Governors the views of the States' representatives should be ascertained with regard to the amount they were prepared to contribute for construction of the Director's quarters and their views together with the Board's decision on the matter should be reported to the full Committee. The report on the proceedings of the last meeting of the Board held on the 20th December 1933 will be found in subject No. 11 on the agenda of the full Committee.

4. The Sub-Committee considered proposals from the Director, Technological Laboratory, for the purchase of two adjacent vacant plots on the northern side of the Technological Laboratory which were considered suitable for future extension of the Laboratory and available at Rs. 8-8-0 per square yard. The Sub-Committee decided that the two plots should be acquired at a cost of about Rs. 25,000 and that by paying an additional amount of Rs. 50 a combined freehold sale-deed should be obtained for the six plots including the four plots at present occupied by the Laboratory.

5. At its meeting held in January 1933, the Joint Sub-Committee of the Imperial Council of Agricultural Research and the Indian Central Cotton Committee agreed to Bengal being brought in the scope of the scheme for the investigation into the cost of production of sugarcane, cotton and their rotation crops by the inclusion of two tracts under one District Supervisor. The proposal was accepted by the Committee in February 1933 which agreed to bear half the cost of the entire scheme. The Government of Bengal, however, found it difficult to run two districts with one Supervisor and applied for an additional annual grant of Rs. 720 for the travelling allowance of a Supervisor whose pay would be met by the Viswa Bharti Institute. The Sub-Committee considered the request and agreed to sanction an additional grant of Rs. 720 per annum for Bengal provided this additional expenditure could be met from savings of the grant already sanctioned.

6. The full Committee at its last meeting held in August 1933 sanctioned Mr. H. D. Nangpal eight months' leave, four months on full average pay and four months on half average pay, to enable him to visit Egypt and Uganda and to undergo training in England. The Government Entomologist, United Provinces, however, considered that it was necessary that Mr. Nangpal should visit Sudan also and that eight months' leave was inadequate as Mr. Nangpal was required to spend a part of this leave in India. The Sub-Committee after full consideration of the proposals of the Government Entomologist decided to extend Mr. Nangpal's leave by 42 days on half average pay, sanctioned a sum of Rs. 1,791-8-0 for cost of passages and overland journeys with permission to visit Sudan and approved of his tour programme. The Sub-Committee also sanctioned a fee of £25 for the training of Mr. Nangpal at the Imperial Institute of Entomology, London.

7. The Indian Central Cotton Committee at its last meeting accepted the recommendations of the Cotton Forecasts Improvement Sub-Committee and sanctioned Rs. 22,500 for studies of village consumption of cotton. The Sub-Committee considered it desirable to keep separate the expenditure on these and other measures arising out of the activities of the Forecasts Improvement Sub-Committee and decided to include a new Head " 1-E—Statistical Research " in the Committee's Budget Heads.

8. The Sub-Committee considered it desirable to call for quotations from more than one broker whenever the Committee wanted to make investments or sell its securities and appointed Messrs. Merwanji & Sons, Messrs. Premchand Roychand & Sons and Messrs. Batliwala and Karani as the Committee's brokers.

9. After the closing in June 1931 of the Pink Boll-worm Scheme in the United Provinces, the Standing Finance Sub-Committee at its meeting held in October 1931 agreed to place the unexpended cash balance of Rs. 2,026-15-3 at the disposal of Mr. Richards for the purpose of demonstration or further experiments and also for proper maintenance and dismantling the Simon heating plant. But due to delay in starting the United Provinces Pink Boll-worm Extension Scheme sanctioned in December 1931, subject to the condition that the United Provinces Government should meet the cost of the machinery required, the heating plant has not yet been removed. In view of the uncertainty as to when the new scheme would be given effect to, the Sub-Committee considered the proposals put up by Mr. Richards and decided that the balance of Rs. 1,658-8-9 still remaining unspent might be placed at his disposal for an indefinite period till the heating plant was dismantled.

10. The Indian Central Cotton Committee at its last meeting sanctioned to Mr. Taskhir Ahmad of the Punjab Agricultural Department for two years a training grant equal to the difference between the leave-salary to which he is entitled for this period and the rate of scholarship admissible to scholars under the supervision of the High Commissioner for India, London. The Sub-Committee considered a statement received from the Director of Agriculture, Punjab, showing the amount of grant admissible to Mr. Taskhir Ahmad and sanctioned him Rs. 4,211 for two years.

11. The Sub-Committee considered that, in proportion to the amount of risk and responsibility which the fumigation work involved, the present scale of pay of Rs. 90—10—150 of the two chemists in the Fumigation Department was very inadequate and decided to recommend to the Government of India that their minimum scale of pay should be fixed at not lower than Rs. 100—10—250 and that they should be sanctioned conveyance allowance of Rs. 15 each per month which they have now been drawing. The Sub-Committee also decided that a duty allowance of Rs. 15 per month should be recommended for the first chemist for administrative work.

12. The Indian Central Cotton Committee at its meeting in August last sanctioned the extension of the Madras Pempheres and Physiological Scheme for a period of five years from the 1st September 1933, subject to the condition (1) that an allowance of Rs. 200 per month be granted to the Cotton Specialist, Coimbatore, for undertaking the supervision of the work of the schemes financed by the Committee, (2) that the staff should receive 25 per cent. above the ordinary pay of their time-scale and (3) that provision for leave and pension contributions on behalf of the staff should depend on the decision of the Government of India on the status of the Committee's servants. A revised scheme was accordingly received from the Government of Madras at a total estimated expenditure of Rs. 2,10,676 which included provision for leave and pension contributions amounting to Rs. 33,801. The Sub-Committee after careful consideration agreed to sanction a total grant of Rs. 1,76,875 omitting the provision for leave and pension contributions.

13. The Standing Finance Sub-Committee at its 122nd meeting held in June 1933 considered a note from the Director of Agriculture, Bombay Presidency, recommending as approved at a Joint meeting of the representatives of the Agricultural Department, and the Hubli and Gadag Co-operative Cotton Sale Societies, a subsidy at the flat rate of Re. 1 per bag of 140 lbs. and annas 13 per bag of 100 lbs. of cotton seed handled by the Hubli and Gadag Co-operative Cotton Sale Societies respectively, in the place of the present annual subsidy of not exceeding Rs. 5,000 per each society to cover the loss on seed transactions, provided the area of operation extended upto 2,00,000 acres. As these proposals involved an annual increase of over Rs. 22,000 more than the present maximum grant paid to these societies, the Sub-Committee decided to request Messrs. Saklatvala and Chunilal B. Mehta to examine the proposals and make suggestions. The report submitted by Messrs. Saklatvala and Chunilal B. Mehta, recommending a subsidy on the same lines as the Coimbatore (Co. 2) Seed Distribution and Extension Scheme, viz., at a rate of interest not exceeding 5 per cent. on capital outlay and guarantee against loss up to a maximum of 10 per cent. of capital outlay, was approved by the Sub-Committee and its decision was communicated to the Director of Agriculture, Bombay Presidency.

14. The Committee at its meeting held in August 1933 sanctioned the extension of the Baroda Root Rot Scheme for a period of three years from February 1934 to January 1937, subject to the following modifications :—

(1) that the additional Breeding Assistant proposed for carrying out work on the Jagudan Farm was unnecessary, and

(2) that the higher rates of pay proposed for the Mycological and Breeding Assistants should be fixed at the rates which are paid by the Bombay Government for men of their qualifications and experience.

In accordance with these recommendations, the Sub-Committee considered the revised budget estimates forwarded by the Director of Agriculture, Baroda State, and sanctioned a total sum of Rs. 36,459 for a period of three years against an original estimate of Rs. 40,522–8–0 which included provision for the Breeding Assistant for Jagudan.

15. The extension of the Hyderabad Botanical Research Scheme for a period of five years from the 1st April 1934 was sanctioned by the Indian Central Cotton Committee at its last meeting, subject to the conditions :—

(1) that only two of the proposed four variety testing stations are required ;

(2) that the pay of the Cotton Research Botanist be fixed on the scale of Rs. 1,000—50/2—1,250 and

(3) that the revision of the pay of the 1st and 2nd Assistant Cotton Research Botanists be taken up when they reached the maxima of their present scales.

In pursuance of these modifications revised estimates received from H. E. H. the Nizam's Government at a total estimated cost of Rs. 2,42,592 against the original estimate of Rs. 2,82,259 spread over a period of five years were considered and approved by the Sub-Committee.

16. A Balance Sheet of the audited accounts of the Committee's funds and the Provident Fund as on the 30th September 1933 and also the Financial Statement* as on 31st December 1933 are submitted for information. Rs. 21,10,274–4–7 of the Committee's securities are invested in Government Paper and Rs. 6,13,040–10–0 in long-dated Corporation Bonds. As will be seen from the Financial Statement the market value of the Committee's securities has appreciated by Rs. 3,46,545–8–5 but to finance all the schemes which are to be put in operation it will be necessary in the near future to sell some of them.

17. Revised Estimates of Receipts and Expenditure for the current financial year are submitted for approval. Cotton cess receipts up to the end of December 1933 amounted to Rs. 4,00,731–8–7 as against Rs. 3,21,370–7–2 for the corresponding period of last year. No change is therefore required to be made in the original estimate of Rs. 5,00,000. Owing to the conversion of the Committee's securities in 5 per cent. 1935 Taxable Bonds (withdrawn by the Government) into 3½ per cent. Government of India Loan 1947/50 of the like face value, the Committee's annual income has been reduced by Rs. 6,646 this year as the half yearly interest on the converted loan for the 2nd half of the year will only be due in the next financial year.

The total expenditure for the year is now estimated at Rs. 10,35,497–5–0 against Rs. 12,27,405–5–0 in August last; the decrease of Rs. 1,91,908 being chiefly due to savings as detailed in the Revised Estimates. The closing balance (excluding recoverable loans amounting to Rs. 15,355–9–3) at the end of the current year will remain at Rs. 25,56,201–14–6 as compared with Rs. 29,54,499–3–6 at the end of last year.

18. The draft Budget for 1934–35 is also submitted for approval, the estimates of receipts from cotton cess have been retained at the same figure as in the revised estimates for the current financial year (viz., Rs. 5,00,000) and the figure under interest has been reduced from Rs. 1,33,700 to Rs. 1,18,500 in view of the necessity which is likely to arise for the sale of some of the securities.

19. The Revised Estimates for 1933–34 of the Publicity and Propaganda Department have been shown as Rs. 25,687 against Rs. 29,209 sanctioned. The decrease is due to savings under various sub-heads.

20. The draft Budget for 1934–35 of the Publicity and Propaganda Section is also attached, and is for approval. The expenditure is estimated at Rs. 30,074 as against Rs. 25,687 in the Revised Estimates for 1933–34.

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* Not printed.

BALANCE SHEET AS AT SEPTEMBER 30TH, 1933.

Balance Sheet as at September 30th, 1933.

The Balance Sheet as at 30th September 1933 is attached, this is prepared from the audited accounts and shows receipts and expenditure from the beginning of cotton cess.

RECEIPTS.

	Rs. a. p.	Rs. a. p.
Cotton cess receipts		88,32,276 10 8
Interest account—		
Amount received on investments ..	12,78,588 0 0	
Add—Refund of income tax deducted from interest	15,745 3 0	
	12,94,333 3 0	
Less—		
1. Interest paid in advance at the time of purchasing Government paper (since recovered), interest on temporary overdrafts and bank's commission for collection of interest	43,423 12 5	
2. Interest credited to Provident Fund account	4,886 6 2	
3. Bank's withdrawal charges for securities sold	2,366 1 0	
4. Income-tax deducted on interest ..	19,967 12 8	
5. Brokerage for sterling loan sold ..	291 9 0	—
6. Provision for Sinking Fund	3,672 2 0	
	74,607 11 3	12,19,725 7 9
Profit on conversion and sale of securities ..		53,671 12 7
Sinking Fund account		3,672 2 0

EXPENDITURE.

		Rs. a. p.	Rs. a. p.
I. A.	Administration		13,70,851 3 2
B.	*Improvement of Cotton Marketing—*		
1.	Cost of exhibits, Moisture Tests, etc.	82,120 11 2	
2.	Cost of cotton growing in India	30,000 0 0	1,12,120 11 2
C.	*Seed Distribution and Extension Schemes—*		
1.	Hubli	23,487 0 9	
2.	Gadag	26,082 7 9	
3.	Gadag (Supplementary) ..	12,917 5 11	
4.	Khandesh	77,599 2 3	
5.	Surat	26,201 4 7	
6.	Hyderabad	14,725 14 5	
7.	Madras (Tiruppur) ..	6,929 0 0	
8.	Madras Co. 2	6,109 6 6	
9.	Madras H. 1	1,920 0 0	
10.	Sind	69,133 14 5	
11.	Athani	5,826 4 0	
12.	Central Provinces ..	56,994 11 5	
13.	Lyallpur ginnery ..	18,125 0 0	3,46,051 8 0

Miscellaneous receipts		19,491	9	0		
Refund from Provident Fund for contributions disallowed to subscribers		3,391	1	11		
Suspense receipts—unexpended balance of Dr. Pendleton against seeds sent last year ..		4	3	0		
Carried over ..		1,01,32,232	14	11		
D. *Printing and Propaganda*—						
(*a*) Publicity and Propaganda ..	24,149	4	5			
(*b*) Printing and Distribution ..	17,506	11	9		41,656	0
II. *Technological Research*—						
(1) Technological Laboratory—						
A. Capital Expenditure—						
(*i*) Land and Buildings ..	3,55,797	9	11			
(*ii*) Machinery	85,019	6	1			
(*iii*) Freight	7,502	2	8			
(*iv*) Apparatus and Equipment ..	41,558	3	7			
(*v*) Machinery workshop ..	5,789	8	3			
B. Working Expenses	12,75,862	0	10			
(2) Provincial	44,266	4	3		18,15,795	3 7
III. Research Studentships					2,14,652	14 0
Agricultural Research Grants—						
IV. *Bombay*—						
1. (*a*) Surat Physiological ..	2,44,705	6	3			
(*b*) Surat Physiological Writing-up	5,453	3	6			
2. (*a*) Surat Boll-worm ..	1,14,509	9	7			
(*b*) Surat Boll-worm Propaganda.	93,411	1	3			
(*c*) Surat Boll-worm Writing-up ..	2,117	3	0			
3. (*a*) Dharwar Wilt	1,81,515	7	11			
(*b*) Dharwar Wilt Writing-up ..	10,727	3	3			
4. Khandesh Cotton Breeding ..	26,249	14	0			
Carried over ..	6,78,689	0	9		39,01,127	8 1

	Rs.	a.	p.
Brought forward ..	1,01,32,232	14	11

		Rs.	a.	p.	Rs.	a.	p.
	Brought forward ..	6,78,689	0	9	39,01,127	8	1
	5. Co-ordination of Cotton Research	1,749	7	6			
	6. Jalgaon Cotton Breeding ..	10,441	0	9			
	7. Broach Cotton Breeding ..	11,970	11	3			
V.	*Madras*—						
	(a) Herbaceum	90,404	7	2			
	(b) Pompheres and Physiological ..	41,239	13	9			
	(c) Fodder Cholam	5,953	10	4			
	(d) Nadam Cotton Breeding ..	1,400	0	0			
VI.	*Punjab*—						
	(a) Botanical	3,95,827	0	7			
	(b) Entomological	1,28,584	4	1			
	(c) White Fly	26,983	10	6			
	(d) Root Rot	4,293	7	0			
	(e) Spraying Trials	9,750	0	0			
VII.	Central Provinces	2,01,712	0	3			
VIII.	*United Provinces*—						
	(a) Entomological	1,42,740	0	9			
	(b) Rohilkhand and Bundelkhand Cotton Survey	2,090	0	0			
IX.	Institute of Plant Industry, Indore ..	11,86,343	12	0			
X.	Sind	1,45,514	7	8			

XI.	*Burma*—		
	(*a*) Capital Expenditure	2,000 15 5	
	(*b*) Cotton Improvement ..	14,466 10 6	
XII.	*Hyderabad*—		
	(*a*) Botanical	1,04,357 15 11	
	(*b*) Cotton Survey	14,136 13 10	
	(*c*) Pink and Spotted Boll-worm ..	3,170 0 0	
XIII.	Bikaner	36,676 6 9	
XIV.	*Baroda*—		
	(*a*) Root Rot	17,812 7 6	
	(*b*) Comparative Tests	4,251 5 3	33,72,465 9 6
XV.	Loans recoverable (but considered doubtful)—		
	1. Co-operative Cotton Sale Society, Hubli	8,063 9 3	
	2. Co-operative Cotton Sale Society, Gadag	7,292 0 0	15,355 9 3
	Suspense account		3,007 4 7
	By Balance		28,40,276 15 6
	Grand Total ..		1,01,32,232 14 11

Grand Total .. 1,01,32,232 14 11

BALANCE SHEET AS AT 30th SEPTEMBER 1933.

Provident Fund Account.

RECEIPTS.	Rs. a. p.	Rs. a. p.
Subscribers' contributions account ..	1,27,744 11 9	
Less—Payments made to subscribers resigned	31,970 3 6	95,774 8 3
Committee's contributions ..	1,16,097 13 0	
Less—Payments made to subscribers resigned and forfeitures to the Committee	29,975 15 3	86,121 13 9
Interest received on investments ..	2,746 8 0	
Interest received on advances ..	48 3 0	
	2,794 11 0	
Less—(1) Income tax deducted from interest	96 3 0	
(2) Bank's commission for collection of interest	6 14 0	
	103 1 0	2,691 10 0
Lapse and Forfeiture account ..	....	66 6 2
Suspense Deposit of Mr. Dutt's own contributions with interest ..	....	968 1 10
Grand Total ..		1,85,622 8 0

EXPENDITURE.	Rs. a. p.	Rs. a. p.
By cost of stamps and professional charges for amendment of Provident Fund Rules ..	....	30 2 0
Interest accrued on Government paper up to 31st March 1933 credited to subscribers ..	....	1,738 2 0
By advances to subscribers ..	23,549 2 0	
Less—Recoveries made up to 30th September 1933 ..	21,785 3 0	1,763 15 0
By balance ..	....	1,82,090 5 0
Grand Total ..		1,85,623 8 0

REVISED ESTIMATES, 1933-34.

MO-III Bk Y 70-5

Revised Estimates, 1933-34—All Heads.

(As passed by the Indian Central Cotton Committee on the 30th January 1934.)

RECEIPTS.	Rs.	a.	p.	Rs.	a.	p.
To Opening Balance ..	29,54,499	3	6			
Loans Recoverable account ..	15,355	9	3			
				29,69,854	12	9
Cotton cess receipts ..				5,00,000	0	0
Interest account ..				1,33,700	0	0
Miscellaneous receipts ..				2,500	0	0

EXPENDITURE.	Sanctioned budget. Rs.	a.	p.	Estimated expenditure. Rs.	a.	p.	Savings + Deficits − Rs.	a.	p.
I. A. Administration	1,51,160	0	0	1,12,270	0	0	38,890	0	0
B. *Improvement of Cotton Marketing*—									
1. Cost of Exhibits, moisture tests etc.	5,000	0	0	3,000	0	0	2,000	0	0
2. Cost of growing cotton in India.	73,143	0	0	69,943	0	0	3,200	0	0
C. *Seed Distribution and Extension Schemes*—									
1. *Bombay Presidency*—									
(*i*) Hubli	8,560	0	0	8,060	0	0	500	0	0
(*ii*) Gadag	9,240	0	0	8,540	0	0	700	0	0
(*iii*) Gadag Supplementary ..	4,612	0	0	4,512	0	0	100	0	0
(*iv*) Haveri	2,800	0	0	....			2,800	0	0
(*v*) Athani	6,322	0	0	5,622	0	0	700	0	0
(*vi*) Bailhongal	4,285	0	0	....			4,285	0	0
(*vii*) Surat	7,860	0	0	5,460	0	0	2,400	0	0
(*viii*) Khandesh	52,068	0	0	33,068	0	0	19,000	0	0
2. *Madras Presidency*—									
(*i*) Pay and allowances of Business Manager, Tiruppur .	3,600	0	0	3,600	0	0	....		
(*ii*) Co. 2	11,630	0	0	8,130	0	0	3,500	0	0
(*iii*) H1	4,480	0	0	4,480	0	0	....		

	3. Sind	31,000	0	0	38,000	0	0	*—7,000	0 0
	4. Hyderabad State	4,936	0	0	5,056	0	0	†— 120	0 0
	5. Central Provinces	25,069	8	0	21,069	8	0	4,000	0 0
	6. Baroda	5,120	0	0	5,120	0	0	....	
	7. Punjab—sale of all farm crop produce	5,000	0	0	1,666	0	0	3,334	0 0
	D. *Printing and Propaganda*—								
	(*a*) Publicity and Propaganda ..	29,209	0	0	25,687	0	0	3,522	0 0
	(*b*) Printing and Distribution ..	11,000	0	0	11,000	0	0	....	
	E. Statistical Research	22,500	0	0	7,500	0	0	15,000	0 0
II.	*Technological Research*—								
	1. *Technological Laboratory*—								
	(*a*) Capital expenditure ..	24,000	0	0	24,000	0	0	....	
	(*b*) Working expenses ..	1,66,055	0	0	1,60,135	0	0	5,920	0 0
	2. Provincial	14,500	0	0	13,500	0	0	1,000	0 0
III.	Research Studentships	20,000	0	0	15,000	0	0	5,000	0 0
	Agricultural Research Grants.								
IV.	*Bombay*—								
	(*a*) 1. Surat Physiological ..	514	0	0	514	0	0	....	
	2. Surat Physiological Writing-up	6,961	1	0	6,461	1	0	500	0 0
	(*b*) Surat Boll-worm Clean-up Scheme	60,683	0	0	46,683	0	0	14,000	0 0
	Carried over ..	7,71,307	9	0	6,48,076	9	0	1,23,231	0 0

Carried over ..	36,06,054	12 9

*Additional provision sanctioned by the 121st Standing Finance Sub-Committee from previous savings.
† Excess will be met from savings.

MO-III Bk Y 70—5a

RECEIPTS—*contd.*

	Rs.	a.	p.
Brought forward ..	36,06,054	12	9

EXPENDITURE—*contd.*	Sanctioned budget. Rs.	a.	p.	Estimated expenditure. Rs.	a.	p.	Savings + Deficits − Rs.	a.	p.
Brought forward ..	7,71,307	9	0	6,48,076	9	0	1,23,231	0	0
(*c*) 1. Dharwar Wilt	120	0	0	120	0	0	....		
2. Dharwar Wilt Writing-up Scheme	1,151	5	0	1,151	5	0	....		
(*d*) Broach Cotton Breeding ..	13,000	0	0	12,000	0	0	1,000	0	0
(*e*) Jalgaon Cotton Breeding Scheme	7,414	0	0	7,414	0	0	....		
(*f*) Co-ordination of Cotton Research	1,000	0	0	500	0	0	500	0	0
(*g*) Khandesh Cotton Breeding ..	340	13	0	340	13	0	....		
(*h*) Small Leaf Disease Survey ..	1,850	0	0	1,850	0	0	....		
V. *Madras*—									
(*a*) Herbaceum	9,700	0	0	10,100	0	0	* —400	0	0
(*b*) Pempheres and Physiological ..	29,403	0	0	29,403	0	0	....		
(*c*) Fodder Cholam	3,312	0	0	3,312	0	0	....		
(*d*) Breeding of Nadam Cotton ..	2,790	0	0	2,790	0	0	....		
VI. *Punjab*—									
(*a*) Botanical	60,200	0	0	32,200	0	0	28,000	0	0
(*b*) Entomological	22,060	0	0	22,060	0	0	....		
(*c*) White Fly	11,920	0	0	11,920	0	0	....		
(*d*) Root Rot	4,502	0	0	3,702	0	0	800	0	0
(*e*) Spraying Trials	8,000	0	0	4,000	0	0	4,000	0	0
(*f*) Physiological	4,462	0	0	....			4,462	0	0
(*g*) Defibrating and Delinting Plant—									
(*i*) Non-recurring	6,700	0	0	6,700	0	0	....		
(*ii*) Recurring	1,000	0	0	1,000	0	0	....		
VII. Central Provinces	47,619	0	0	34,619	0	0	13,000	0	0

VIII.	*United Provinces*—									
	(*a*) Recurring grant for staff ..	7,680	0	0	7,680	0	0	....		
	(*b*) Rohilkhand and Bundelkhand Cotton Survey	5,200	0	0	5,200	0	0	....		
IX.	Institute of Plant Industry, Indore	1,00,000	0	0	1,00,000	0	0	....		
X.	Sind	28,143	0	0	25,143	0	0	3,000	0	0
XI.	Burma Cotton Improvement ..	8,712	0	0	7,812	0	0	900	0	0
XII.	*Hyderabad*—									
	(*a*) Botanical	26,629	0	0	25,529	0	0	1,100	0	0
	(*b*) Cotton Survey	9,163	0	0	8,163	0	0	1,000	0	0
	(*c*) Pink and Spotted Boll-worm..	11,680	0	0	7,680	0	0	4,000	0	0
XIII.	Bikaner	7,640	0	0	4,340	0	0	3,300	0	0
XIV.	*Baroda*—									
	(*a*) Root Rot	11,448	10	0	9,748	10	0	1,700	0	0
	(*b*) Comparative Tests of 1027 and 1A cottons ..	173	0	0	173	0	0	....		
XV.	Bengal Comilla cotton ..	3,085	0	0	770	0	0	2,315	0	0
	Total expenditure ..	12,27,405	5	0	10,35,497	5	0	1,91,908	0	0
XVI.	Loans Recoverable (but considered doubtful):—									
	1. Hubli Co-operative Cotton Sale Society	8,063	9	3						
	2. Gadag Co-operative Cotton Sale Society	7,292	0	0						
					15,355	9	3			
	By Balance ..				25,55,201	14	6			
Total ...	Total ..	36,06,954	12	9	36,06,954	12	9			

* Additional provision sanctioned by the 121st Standing Finance Sub-Committee, excess being met from previous savings.

REVISED ESTIMATES, 1933-34.

Provident Fund Account.

RECEIPTS.	Rs. a. p.	Rs. a. p.	EXPENDITURE.	Rs. a. p.
To Opening Balance on 1st April 1933 .		1,70,531 0 11	By expenditure for stationery, printing and professional charges for amendment of Rules ..	58 8 0
To subscriber's contributions ..	18,000 0 0		By Balance ..	2,11,415 14 9
To Committee's contributions ..	18,000 0 0			
	36,000 0 0			
Less—				
Payments to subscribers resigned during the year :—				
1. Their own contributions ..	3,157 2 7			
2. Committee's contributions due ..	3,028 4 8			
	6,185 7 3	29,814 8 9		
To recoveries against advances ..		3,077 12 0		
To interest (net) receivable ..		7,805 0 0		
To Lapse and Forfeitures account ..		246 1 1		
Total ..		2,11,474 6 9	Total ..	2,11,474 6 9

BUDGET—1934-35.—ALL HEADS.

Budget—1934-35—All Heads.

(As passed by the Indian Central Cotton Committee at its meeting held on the 30th January 1934.)

RECEIPTS.

	Rs. a. p.	Rs. a. p.
To opening Balance on 1st April 1934 ..	25,55,201 14 6	
Loans Recoverable Account ..	15,355 9 3	
		25,70,557 7 9
Cotton Cess Receipts ..		5,00,000 0 0
Interest Account ..		1,18,500 0 0
Miscellaneous receipts		2,500 0 0

EXPENDITURE.

		Rs. a. p.	Rs. a. p.
1.	A. *Administration*		1,51,020 0 0
	B. *Improvement of Cotton Marketing*—		
	(*i*) Cost of Exhibits, Moisture tests, etc.	5,000 0 0	
	(*ii*) Cost of growing cotton in India ..	73,143 0 0	78,143 0 0
	C. *Seed Distribution and Extension Schemes*—		
	(1) *Bombay Presidency*—		
	(*i*) Hubli	8,679 0 0	
	(*ii*) Gadag	8,737 0 0	
	(*iii*) Gadag Supplementary ..	5,159 0 0	
	(*iv*) Haveri	2,800 0 0	
	(*v*) Athani	12,465 0 0	
	(*vi*) Bailhongal	6,285 0 0	
	(*vii*) Surat	10,355 0 0	
	(*viii*) Khandesh	46,535 0 0	
	(*ix*) Deccan Canals (Banilla) ..	4,645 0 0	
	(2) *Madras Presidency*—		
	(*i*) Pay and allowance of Business Manager, Tiruppur	5,305 0 0	
	(*ii*) Co. 2	18,580 0 0	
	(*iii*) H-1	14,380 0 0	
	(3) *Sind*	54,924 0 0	
	(4) Hyderabad State ..	5,128 0 0 2,016 0 0	
	(5) *Central Provinces*—		
	(*i*) Verum cotton ..	8,997 4 0	
	(*ii*) Long staple cotton ..	27,482 0 0	
	(6) Baroda	5,120 0 0	

	(7) Punjab—Sale of all farm crop produce	5,000	0	0			
	D. *Printing and Propaganda*—				2,50,592	4	0
	(a) Publicity and Propaganda ..	30,074	0	0			
	(b) Printing and Distribution ..	11,000	0	0			
					41,074	0	0
	E. *Statistical Research* ..				13,532	0	0
II.	*Technological Research*—						
	(1) Technological Laboratory—						
	(a) Capital expenditure ..	1,18,000	0	0			
	(b) Working Expenses ..	1,71,198	0	0			
	(2) Provincial	14,987	0	0			
					3,04,185	0	0
III.	*Research Studentships*				20,000	0	0
	Agricultural Research Grants.						
IV.	*Bombay*—						
	(a) Surat Boll-worm Clean-up Scheme	4,584	0	0			
	(b) Broach Cotton Breeding Scheme	10,044	0	0			
	(c) Jalgaon Cotton Breeding Scheme	8,043	0	0			
	(d) Small Leaf Disease Survey ..	3,268	0	0			
V.	*Madras*—						
	(a) Herbaceum	2,500	0	0			
	(b) Pempheres and Physiological ..	35,859	0	0			
	(c) Fodder Cholam	4,168	0	0			
	(d) Breeding of Nadam Cotton ..	2,528	0	0			
VI.	*Punjab*—						
	(a) Botanical	61,810	0	0			
	(b) Entomological (Pink and Spotted Boll-worms)	31,100	0	0			
	(c) White Fly	10,709	0	0			
	(d) Root Rot	4,814	0	0			
	(e) Spraying Trials	6,590	0	0			
	(f) Physiological	17,184	0	0			
	(g) Survey of Disease of Malformation	2,674	0	0			
	Carried over ..	2,05,875	0	0	8,60,546	4	0

Carried over ..	31,91,557	7	9	

RECEIPTS.		Rs.	a.	p.
Brought forward ..		31,91,557	7	9
Grand Total ..		31,91,557	7	9

EXPENDITURE.		Rs.	a.	p.	Rs.	a.	p.
Brought forward ..		2,06,875	0	0	8,60,546	4	0
VII.	*Central Provinces*—						
	(*a*) Botanical	37,742	0	0			
	(*b*) Entomological	3,380	0	0			
VIII.	*United Provinces*—						
	(*a*) Recurring grant for staff ..	758	0	0			
	(*b*) Rohilkhand and Bundelkhand Cotton Survey	5,300	0	0			
IX.	*Institute of Plant Industry, Indore* ..	1,15,000	0	0			
X.	*Sind*	33,438	0	0			
XI.	*Burma Cotton Improvement* ..	10,260	0	0			
XII.	*Hyderabad*—						
	(*a*) Botanical	56,710	0	0			
	(*b*) Cotton Survey	9,211	0	0			
	(*c*) Pink and Spotted Boll-worm ..	8,297	0	0			
XIII.	*Bikaner*	7,640	0	0			
XIV.	*Barbados* Root Rot	11,718	0	0			
XV.	*Bengal Comilla Cotton*	3,085	0	0			
					5,08,414	0	0
	Total Expenditure ..	....			13,68,960	4	0
XVI.	*Loans recoverable* (but considered doubtful)—						
	(1) Hubli	8,063	9	3			
	(2) Gadag	7,292	0	0			
					15,355	9	3
	By Balance ..	....			18,07,241	10	6
	Grand Total ..				31,91,557	7	9

Provident Fund Account.

RECEIPTS.				EXPENDITURE.		
	Rs.	Rs. a. p.			Rs. a. p.	
To Opening Balance on 1st April 1934 ..		2,11,415 14 9	By Balance		2,61,246 2 9	
Subscribers' contributions	20,000					
Committee's contributions	20,000					
		40,000 0 0				
Recoveries against advances		930 4 0				
Interest receivable		8,900 0 0				
Total ..		2,61,246 2 9	Total ..		2,61,246 2 9	

REVISED ESTIMATES 1933-34—PUBLICITY AND PROPAGANDA.

Statement showing the sanctioned budget, revised estimated expenditure with savings and deficits for the year ending 31st March 1934.

Sub-heads.	Original sanctioned Budget, 1933-34	Expenditure for 1933-34.			Savings + Deficits —	Remarks.
		Expenditure up to 31st December 1933.	Estimated from 1st January 1934 to 31st March 1934.	Total for 1933-34.		
	Rs.	Rs.	Rs.	Rs.	Rs.	
1. (a) Salary of Officer	11,742	8,966	2,700	12,779	—1,037	Deficit as no provision was made for House Rent Allowance sanctioned by the Committee subsequently only in June 1933 with retrospective effect from 15th October 1932.
(b) House Rent Allowance	....	....	225			
(c) Provident Fund	....	....	888			
2. Establishment	2,729	1,668	568	2,425	+ 304	Excess due to 5 per cent. cut and leave salary not utilised.
(a) Provident Fund	....	....	189			
3. Menials	338	225	75	325	+ 13	Excess due to leave salary not utilised.
(a) Provident Fund	....	....	25			
4. Travelling Allowance	3,500	2,612	888	3,500	....	
5. Allowance to Translators	2,000	50	50	100	+1,900	
6. Printing	6,000	869	3,500	4,369	+1,631	
7. Contingencies—						
A. Postage and Telegrams ..	500	237	263	500	....	
B. Furniture	400	88	200	288	+ 112	
C. Stationery	300	92	100	192	+ 108	
D. Exhibits and cost of transport, accommodation, etc.	1,000	201	500	701	+ 299	
E. Miscellaneous	700	308	200	508	+ 192	
Total ..	29,209	15,316	10,371	25,687	+3,522	

Budget 1934–35—*Publicity and Propaganda.*

Sub-heads.	Budget for 1933–34.		Budget for 1934–35.	Remarks.
	Original.	Revised.		
	Rs.	Rs.	Rs.	
1. Salary of Officer ..	11,742	12,779	12,600	
2. Establishment ..	2,729	2,425	2,749	
3. Menials	338	325	334	
4. Travelling Allowance ..	3,500	3,500	5,000*	*Excess due to additional touring to be done in Indian States.
5. Allowance to Translators ..	2,000	100	1,000	
6. Printing	6,000	4,369	6,000	
7. Contingencies—				
A. Postage and Telegrams.	500	500	500	
B. Furniture	400	288	100	
C. Stationery ..	300	192	200	
D. Exhibits and cost of transport, accommodation, etc.	1,000	701	1,000	
E. Miscellaneous ..	700	508	600	
Total ..	29,209	25,687	30,074	

APPENDIX VI.

SUBJECT 29.—*Summary of Proceedings of the Local Sub-Committee.*

Since the last meeting of the Committee in August 1933, three meetings of the Local Sub-Committee have been held.

The Sub-Committee nominated Mr. Chunilal B. Mehta to the seat on the Joint Committee of the Imperial Council of Agricultural Research and the Indian Central Cotton Committee vacated by Sir Joseph A. Kay.

A firm in Broach drew the attention of the Committee to the use of over-head water sprinklers and humidifiers in press houses and godowns. As no legal action was possible against such malpractices, the Sub-Committee decided that, as in the past, leaflets showing the harmful effects of watering cotton should be distributed in the Broach area.

The Sub-Committee noted with satisfaction the reply of the Railway Board intimating the reduction of railway freight rates on cotton from the Broach tract to Bombay as an experimental measure during the period 1st October 1933 to 31st May 1934. It will be remembered that the Sub-Committee had drawn the attention of the Railway Board in May 1932 to the possible losses to the railway companies through the ruling lower freight rates for carrying cotton in country crafts between Bombay, Broach, Surat and Kathiawar ports.

A case of rejection, due to faulty marking, of a tender of bales pressed in the Manavadar State was brought to the notice of the Sub-Committee. This case showed that Indian States had not followed the lead given by the Government of India in 1929 in amending Rule 7 of the Indian Cotton Ginning and Pressing Factories Rules so as to make the manner of marking bales less meticulous than what it was before. The Sub-Committee therefore decided that the attention of the States' authorities should be drawn to this.

The Sub-Committee considered a letter received from the Great Indian Peninsula Railway asking for suggestions on the proposed reduction of freight rates on cotton booked from South India to Bombay and other mill centres in India. The Sub-Committee decided that the various Chambers of Commerce and Trade Associations concerned should be consulted to enable the Committee to examine the subject in all its bearings.

A letter sent by the Buyers' and Shippers' Chamber of Karachi asking for representation on the Committee was considered by the Sub-Committee. The Sub-Committee was still of opinion that additional commercial representatives from Karachi on the Committee would upset the balance of representation on the Committee.

On a reference made by the East India Cotton Association regarding the heavy incidence of road tolls on carts and lorries carrying cotton, the Sub-Committee agreed with the views of the East India Cotton Association that this was a matter on which a joint representation should be made to the Government of Bombay.

The Indian Central Cotton Committee at its last meeting decided that the subject of the Cotton Transport Act in Indore should be referred to a Sub-Committee consisting of representatives of the mill industry in Indore, the Gwalior representative on the Committee and the Local Sub-Committee. The Joint Sub-Committee met on the 19th January 1934 when the representatives of the Indore mills explained their position that so long *Desi-Mewadi* cotton was prevented from entering the State except under license their object was served and that no alteration in the present Act was necessary. They anticipated no difficulty in the railway companies refusing to book *Desi-Mewadi* cotton to any station in Indore State. In view, however, of the absence of the representatives of Gwalior and Indore States it was decided that further consideration of the subject should be postponed to some convenient date and that in the meanwhile the representatives of the Indore mills should supply figures for 1932–33 of imports of *kapas* and ginned cotton into the State.

Three other subjects which engaged the attention of the Sub-Committee were (1) Cotton Policy in Surat, (2) Goghari cotton sowings in Navsari Tract and (3) Adoption of Universal Standards for Indian cottons. These subjects are separately dealt with under items Nos. 6, 7 and 8 on the agenda of the full Committee and have not been detailed here.

APPENDIX VII.

SUBJECT 33.—*Cotton development in the Barrage areas of Sind—Note by the Chief Agricultural Officer in Sind.*

Secretary's Note.

The attached note on cotton development in the Barrage areas of Sind, received from the Chief Agricultural Officer in Sind, is for consideration.

Note on certain important aspects of the development of cotton cultivation in the Barrage areas of Sind

by

W. J. Jenkins, Esq., M.A., B.Sc., I.A.S., Chi gricultural Officer in Sind.

1. The Indian Central Cotton Committee has always shown considerable interest in the development of cotton cultivation in the Lloyd Barrage areas of Sind. At the 20th meeting of the Committee, held on the 11th November 1929, it was agreed that the Government of Bombay should be requested to give the Committee an opportunity of expressing its views from time to time on the various problems which would arise consequent upon the extension of cotton cultivation in the new irrigated areas of Sind. Accordingly, at the 22nd Meeting of the Committee, held on the 15th-16th December 1930, the Chief Agricultural Officer in Sind submitted a "Note on some of the most important and imminent problems connected with the future development of cotton cultivation in Sind under the Lloyd Barrage" which formed a basis for valuable discussions in both the Agricultural Research Sub-Committee and in the full Committee meetings. This note dealt with (*a*) the problem of the variety, (*b*) the problem of the ginning and pressing factories and (*c*) the problem of seed production, extension and distribution, and much useful and practical advice was given by the members of the Committee on the

solution of these three major problems of cotton development in the Barrage areas. In addition to its advice, the Committee has rendered very practical assistance to the Department of Agriculture, Sind, by sanctioning a grant of Rs. 93,000 for a period of three years to assist in the extension of the cultivation of improved varieties of cotton in Sind. At its meeting in August 1933, the Central Cotton Committee considered the final report of the " Sind Cotton Extension Scheme " and sanctioned its extension for a further period of five years, i.e., till 1939, at a total additional cost of Rs. 2,96,540.

2. The object of this Note is to place before the Indian Central Cotton Committee brief statements upon certain aspects and problems of the development of cotton cultivation in Sind with the object of obtaining the expert advice and opinion, which the Indian Central Cotton Committee, by virtue of its constitution, is eminently qualified to give. Such advice will be of the greatest value to the Government of Bombay and to the Agricultural Department in Sind and will assist considerably in the carrying out of a consecutive policy of cotton improvement and extension in the Barrage areas. Certain of the subjects mentioned in this Note have already been brought to the notice of the Committee in the minutes of the various regular meetings of the Sind Cotton Committee but, in view of their increasing importance to the future of cotton cultivation in Sind, a more direct reference appears to be most desirable. In the past season, viz., 1933-34, the area under cotton cultivation in Sind has increased from three and a half lakhs of acres to approximately five and a half lakhs of acres—the area under medium and long-stapled cottons being fully double its previous maximum—numerous new ginning factories are in course of construction in the main cotton-growing areas and enquiries for suitable sites for additional factory construction are increasing in number. A Cotton Trade Association has been formed in Karachi and a much greater interest is being shown in Sind cottons by spinners both in Indian mills and abroad. It is therefore clear that no measures should be neglected which will assist in establishing this rapid development of cotton cultivation in the Barrage areas on sound foundations and in the best interests of the present—and future cotton growers of the province. In this connection, the advice and assistance of all sections of the cotton growing and trading industries, as represented on the Indian Central Cotton Committee, must be of inestimable value.

3. *Work of the Agricultural Department on cotton improvement.*—Botanical research work on the cotton crop in Sind is being concentrated upon (*a*) Punjab-American types and (*b*) imported American and Egyptian types. With regard to (*a*) botanical selection aims at obtaining higher yielding and hardier strains than at present available while maintaining a staple length of not less than 1″. Improvement in the regularity and the " silkiness " of the staple of the Sind American crop is also being kept in view. With regard to (*b*) the most important requirements are greater resistance to adverse environmental conditions, to " leaf curl " and white-ant attack and earlier maturity and better yields per acre. Further, breeding work on high quality cottons is being concentrated at Mirpurkhas with a view to the ultimate distribution and extension of such cottons in the Jamrao Canal area where conditions appear to be most favourable for their successful and profitable cultivation. Good varieties of African cottons have been obtained and are being tested under Sind conditions.

Sample bales of the improved cottons being dealt with by the Agricultural Department in Sind have been prepared from the current year's crop and are available at the meeting for inspection by members whose opinion of these cottons will be welcomed by the Chief Agricultural Officer.

With regard to Sind *deshi* cotton, the improved variety 27 W. N., evolved by the Agricultural Department, has now become firmly established in Sind and it is estimated that fully 50 per cent. of the *deshi* area in Sind consists largely of this improved variety. It has been suggested both by the Indian Cotton Committee of 1919 and, on various occasions, by members of the Central Cotton Committee that further botanical work should be carried out in Sind with the object of producing a longer-stapled and " silkier " variety of *deshi* cotton in the Barrage areas. In view of the possibility of increased mixing with Punjab-American varieties, should such a development take place in the Sind *deshi* crop and in view of the particular demand by certain spinners for Sind *deshi* on account of its roughness and colour, the Chief Agricultural Officer in Sind is not convinced that the introduction of a longer-stapled *deshi* variety would be advantageous to the Sind cotton-growers in the long run and he would be glad of further advice and discussion on this point. At present, the botanical work on Sind *deshi* cotton is entirely devoted to improvement in increased percentage which would result in immediate increased profits to the growers.

With regard to the superior quality, long-stapled Egyptian and American varieties being grown by the Agricultural Department in Sind, the improved strains Sea Island 2-4, Boss III-16 and Ashmouni 37 appear to be most suited for further extension in

selected areas of the Barrage zone. The Acala 27 and Hartsville 111 strains do not show a sufficiently superior spinning value over the improved Punjab-American 285-F and 289-F varieties to compensate for the lesser yield given by these imported American types and work on them is being largely discontinued. The last spinning test report, received from the Technological Laboratory, Matunga, i.e., for 1932-33, states " Although the mean fibre length and fibre weight per inch of Boss III-16 and Sea Island 2-4 are practically the same, the former cotton has given yarns which are much stronger and more even. Ashmouni 37 is considerably shorter and coarser than Sea Island 2-4 but its yarns are only very slightly weaker. Similarly Acala 27 is considerably shorter than Hartsville 111, but there is not much difference in the spinning performance of these cottons."

On account of the restricted area available for cotton cultivation on Government Farms in Sind, it has not been found possible to grow larger areas under Sea Island, Boss III and Ashmouni improved strains than will yield, at the most, two to three bales of these varieties. The Chief Agricultural Officer considers that, as a preliminary step towards their extension in the districts, the cultivation of these improved varieties by the *Agricultural Department* should be undertaken on larger areas in order to provide sufficient material for complete mill tests on an adequate scale both in Indian mills and abroad in order to obtain full data regarding the returns which might be obtained from these high-quality varieties to the grower in comparison with Punjab-American and *deshi* cottons. This work could be done on leased areas in the vicinity of existing Government Farms and it is suggested that the Central Cotton Committee, if it approves of such a development, might undertake the financing of this stage of extension of superior quality cottons in Sind.

The Central Cotton Committee may be interested to know that the work of introducing cotton cultivation on the Right Bank of the river Indus, carried on under the " Sind Cotton Extension Scheme " is making rapid progress and that a total area of, at least, 5,000 acres under cotton is anticipated next season. The difficulties encountered have been (*a*) difficulty in obtaining irrigation water for early (April) sowings as the demand is at present limited to small scattered cotton fields at this period and is not general over the whole tract, (*b*) the existing rule whereby land assessment is levied on a revenue unit containing different crops according to the crop bearing the highest rate of assessment cultivated in the survey number and (*c*) the total absence of ginning facilities in the tract. Representations regarding (*a*) and (*b*) have been made to the Irrigation and Revenue Departments respectively. With regard to (*c*), it is probable that a small ginnery will shortly be established by private agency. The improved Punjab-American variety, 4-F-98, is well suited to cultivation in this tract and, in general, has given better outturns in the demonstration plots than the *deshi* cotton.

4. *Regulation of the construction of new ginning and pressing factories in the Barrage areas.*—This important subject has been considered in detail by the Sind Cotton Committee who appointed a small Sub-Committee consisting of :

W. J. Jenkins, Esq., Chief Agricultural Officer in Sind (Chairman),
A. P. Darlow, Esq.,
Seth Issardas Varindamal,
Rao Bahadur Tharumal Bilaram,
Khan Bahadur Azim Khan,
Captain L. Vanrenen,

to consider the present position and future requirements of ginning facilities in the Barrage areas and the necessity for some control being exercised over the construction of new factories both with regard to number and situation.

The report of the Sub-Committee is given hereunder :—

" The Sub-Committee considered the Note on the regulation of the construction of ginning and pressing factories submitted by the Chief Agricultural Officer in Sind."

" The Sub-Committee was of the opinion that no immediate action towards the regulation of the construction of new ginning and pressing factories in the Barrage areas was advisable as the majority of the members considered that such regulation, at the present time (i.e. 1933), would tend to discourage the erection of new factories. In view of the definite scarcity of ginning factories in the new cotton-growing tracts, it was felt that nothing should be done which might result in checking or delaying private enterprise in providing increased ginning facilities for the cotton-growers. The possibility of the formation of ' pools ' in ginning and pressing factories in Sind was considered to be remote and, in view of the compactness of the cotton-growing areas, such ' pools ' were unlikely to be formed in the future to the detriment of the interests of the Sind cotton-growers."

"However, the majority of the members of the Sub-Committee were in favour of the amendment of the Cotton Ginning and Pressing Factories Act (1925) in order to give *enabling* powers to local Governments to introduce regulation i.e., licensing of gins and presses in the future should such action be found advisable in the interests of the cotton-growers. It was decided by a majority that this opinion should be brought to the notice of the Indian Central Cotton Committee, Bombay, for further consideration."

"The Sub-Committee on a reference made by the Revenue Officer, Lloyd Barrage, considered that it was unnecessary for Government to take powers to acquire compulsorily sites for ginning and pressing factories at definite centres where all suitable land was already in the hands of private owners. It was felt that there could be no real difficulty for intending ginners to obtain sites at such centres by private negotiation. Captain Vanrenen and Rao Bahadur Tharumal Bilaram dissented from this view and were in favour of Government taking the power of compulsory acquisition of land for construction of new gins and presses."

"The Sub-Committee agreed that all information regarding the probable development of cotton cultivation in the Barrage areas and suitable sites for the establishment of new ginning and pressing factories as contained in the Chief Agricultural Officer in Sind's Note should be given as wide publicity as possible in the interests of the cotton-growers."

"The Sub-Committee was of the opinion that it was desirable that the construction of gins *cum* presses should be encouraged in the Barrage areas and, accordingly, recommend that, in cases where the allotment of a site by Government is in view, preference should be given to applicants who propose to construct both a gin and a press over applicants intending to erect a gin only."

The Report of the Sub-Committee was adopted at the 3rd meeting of the Sind Cotton Committee on the 31st July, 1933.

The anticipated development of cotton cultivation in Sind, from figures supplied by the Chief Engineer in Sind, is as under:

Actual cultivation		*Acres in*		
1932–33	1936–37	1941–42	1946–47	1951–52
3,55,552	5,11,100	6,36,700	7,03,100	7,74,500

The actual number of ginning factories in Sind in 1932–33 was 37 of which 10 were not working. The actual number of gins available was 1,059, which number was calculated to be insufficient to deal with the crop in that year. In 1933-34, the cotton area has increased to approximately 5,25,000 acres and at least six-eight new ginning factories have been constructed or are in course of construction and several existing factories have increased their gin strength. It is estimated that a minimum gin strength of approximately 2,500 gins will be required when full development of cotton cultivation according to the forecast estimate is reached.

Experience in recent years in Sind has shown most emphatically that a scarcity of ginning facilities is much more detrimental to the interests of the cultivators than a surplus and it was this consideration which led the Sind Cotton Committee to decide that, under existing conditions in the Barrage areas, no action should be recommended which might discourage the erection of new factories in the cotton-growing tracts. At the same time, the Agricultural Research Sub-Committee of the Central Cotton Committee emphasized that the regulation, i.e., licensing of gins and presses in Sind, was essential to the proper development of cotton-growing in Sind and expressed the view that a strong recommendation should be made to that effect to the proper authorities by the full Committee. Experience in other cotton-growing provinces—as submitted on many occasions to the Central Cotton Committee—has indicated that unregulated and excessive construction of ginning factories is detrimental to the interests of the cultivators. Accordingly, the Chief Agricultural Officer in Sind desires to invite the attention of the Central Cotton Committee to the opinion expressed in paragraph 4 of the Report of the Sub-Committee on the regulation of new gins and presses in Sind, which was adopted by the Sind Cotton Committee and to invite the opinion of members on the suggestion made therein or on any other measures which might be taken to ensure that the development of the construction of new gins and presses in the Barrage areas can be directed with due regard to the best interests of the cotton-growers of the province.

5. *Saw-ginning of Sind American cotton.*—The Indian Cotton Committee of 1919 recommended that the question of the possibility of using saw gins for Indian cotton as well as of improving roller gins should be further investigated, especially in the tracts in which cotton of American types is grown. This matter has recently been brought to the notice of the Chief Agricultural Officer in Sind by commercial firms dealing in

Sind cotton in Karachi and it has been represented strongly that experimental work on the saw-ginning of the improved Punjab-American varieties of cotton, which will be largely cultivated in Sind under Barrage irrigation, should be commenced as soon as possible. At present, there are no saw-gins working in Sind although, in the past, attempts have been made to utilise saw-gins in ginning factories at Mirpurkhas but these attempts have been abandoned after trial. The cause of the failure of saw-gins in Sind, has, so far as can be ascertained, never been thoroughly investigated but the opinion is advanced that this was due to (*a*) the disinclination of Indian spinners to utilise saw-ginned Indian cottons in their mills, possibly on account of damage to the lint by unsatisfactory settling and inexpert handling and (*b*) the insufficient supply of a type of cotton in Sind suitable for saw ginning. With regard to (*a*) there does not appear to be any reason to believe that properly saw-ginned cotton will not be acceptable to Indian spinners especially as large quantities of saw-ginned American cotton has been imported into India for use in Indian mills in recent years and there is considerable evidence that a premium will be forthcoming for properly saw-ginned cotton over roller-ginned of the same type which would more than compensate for any additional cost in saw-ginning. With regard to (*b*), the area under improved varieties of 285F and 289F Punjab-American cotton is increasing very considerably and large quantities of *kapas* of these varieties, suitable for saw-ginning, will shortly be produced in the Barrage areas. In addition the introduction of saw-ginning in Sind would contribute considerably towards a solution of the labour problem in the cotton tracts by reducing the number of manual workers required in the ginning factories. The Chief Agricultural Officer in Sind would welcome opinions from the members of the Central Cotton Committee on this subject with the object of preparing a scheme for the investigation of the possibilities of saw-ginning of Sind American cotton in co-operation with suitable ginning factory owners in the Barrage areas.

6. *Mycological and entomological problems connected with cotton cultivation in the Barrage areas.*—The Chief Agricultural Officer in Sind desires to bring to the notice of the Indian Central Cotton Committee the necessity for an early and detailed scientific investigation of the major insect pests and fungus and virus diseases which are commonly found to attack and damage the cotton crop in Sind. Such investigation will require the services of a qualified mycologist and entomologist and must be directed towards working out practical and economic control measures. In the first place, special attention is necessary to investigation of the pathological condition known as "leaf curl" which must definitely be considered to be a limiting factor to the extension of Punjab-American, American and Egyptian cottons in the Barrage areas. This disease is being studied from the physiological stand-point at the Physiological Section, Agricultural Research Station, Sakrand, but there is considerable reason to believe that the "leaf curl" damage is the result of previous severe jassid eraphis infestation of the crop and that adequate control measures adopted at critical periods of growth against these insect pests would give practical results of great importance. In the absence of a qualified entomologist on the staff of the Agricultural Department in Sind, it has not been possible to undertake intensive work on this problem, the importance of which may be judged by the estimate that "leaf curl" was responsible in the current season for a reduction in yield of three to four maunds of *kapas* per acre in the Southern Jamrao tract alone. A major pest on cotton in Sind, especially on the high quality imported American and Egyptian varieties, is the white ant, damage from which is especially severe in the new areas now coming under perennial irrigation from the Lloyd Barrage. Various inorganic and organic substances have been tested with the object of controlling white-ant attack but no fundamental work on the life history etc. of the pest under Sind conditions has yet been attempted. In the absence of the information which such research work would provide all attempts at devising suitable control measures must be entirely empirical. The Chief Agricultural Officer in Sind contemplates the submission of proposals for a research scheme on "leaf curl" and white-ant damage to the cotton crop in Sind from the mycological, entomological and agricultural stand-points and submits this brief preliminary note with the object of obtaining expert opinions and advice from scientific workers in other cotton-growing provinces.

7. *The multiplication and distribution of seed of improved varieties of cotton in Sind.*—A seed multiplication scheme for improved varieties of cotton based on "units"—each "unit" representing an area of 25,000 acres finally developed under one variety of improved cotton—has been organised and is now entering upon its third stage. The programme of pure seed multiplication under this scheme consists of five stages for each "unit" viz. (1) seed patch—2½ acres, (2) increase block—25 acres, (3) field-scale plantings—250 acres, (4) village groups—2,500 acres and (5) district groups—25,000 acres. The first three stages are under careful departmental supervision; the fourth and fifth stages will be arranged through selected seed-growers and co-operative organisations.

Nine " units " of multiplication—five for improved *deshi* cotton and four for improved varieties—are commenced annually and in *kharif*, 1934, the " seed-patch " stage (1934 Punjab-American series) of 22½ acres, the " increase block " stage (1933 series) of 225 acres and the " field-scale planting " stage (1932 series) of 2,250 acres will be undertaken by the Agricultural Department in Sind.

The first two stages of the cotton seed multiplication scheme are carried through entirely on Government Farms and hence, control and management present no problems. For the third stage, i.e., field scale plantings, amounting each year to approximately 2,500 acres, arrangements are being made to multiply the seed on the lands of " A " class registered seed-growers who will be bound by agreement (*a*) to sow the pure seed supplied by the Department on good land and in a compact area (*b*) to permit the areas under such seed to be rogued by the Agricultural Department and (*c*) to have the *kapas* from such areas ginned under departmental supervision and to give the Department or its nominated agency, e.g., Sind Central Co-operative Bank, an option to purchase all or part of the seed produce before a certain fixed date at the market rate prevailing at the time of sale. It is clear that the satisfactory working of such an arrangement is very largely dependent upon the co-operation and good-will of the seed grower and that, apart from the advantage of obtaining pure seed at the cheapest rate from the Department, he does not stand to gain any great advantage from the contract. The practical difficulties likely to be met with are in fixing the ginning arrangements to meet the interests and convenience of the seed grower, the ginner and the Department in settling the time of sale and the rate to be paid which is always a source of contention when rates are fluctuating rapidly and in making arrangements for the suitable storage of the seed until it is required for distribution for sowing next season. The Chief Agricultural Officer in Sind proposes to test the present method fully next season and, if it should prove unsatisfactory, to submit to Government proposals for seed-farm grantees who will be strictly bound, in the conditions of their land grants, to grow definite areas under improved varieties of cotton, wheat, etc. in order to make seed available for distribution by the Agricultural Department to other growers. The ginning factory difficulty will be overcome if the Government of Bombay sanction a scheme, already submitted by the Chief Agricultural Officer in Sind, to restart the existing Government ginning factory at Mirpurkhas, which has lain idle since 1918 and, for the restarting and running of which, an initial capital expenditure of Rs. 4,200 and an annual recurring expenditure of Rs. 7,500 (six months' working) is estimated to be required.

With regard to extension in the fourth and fifth stages of the seed multiplication and extension scheme, arrangements have been made to carry out this work through co-operative seed societies, financed by the Sind Central Co-operative Bank but the Chief Agricultural Officer in Sind would appreciate information based upon experience in other cotton growing provinces regarding the final stages of the extension of the seed of improved varieties of cotton into general cultivation. Any details regarding the employment of private agencies in the distribution of the seed of improved varieties of cotton which is suggested by the Royal Commission on Agriculture in India would be particularly valuable as it is along such lines that progress in Sind would appear to be most likely to take place with satisfactory results and with the least expenditure.

Arrangements have been made for ensuring that all consignments of improved cotton seed, issued by the Agricultural Department in Sind, for extension in the districts are accompanied by a report on a germination test, generally carried out at the Agricultural Research Station, Sakrand. With the development of cotton cultivation and the increased demand for departmental seed, the present arrangements are likely to become inadequate in the near future and the establishment of " seed depots " for storage and distribution, where germination tests can be made and reports issued with the seed distributed, is under examination.

8. *Propaganda towards extension of the use of Sind cottons in India and abroad and marketing organisation.*—In view of the large increase of cotton cultivation in Sind which is taking place as a result of the opening of the Lloyd Barrage and Canal Systems, it is most essential that all possible steps should be taken to bring to the notice of spinners in India and abroad the improved types of cotton which will form the bulk of the cotton crop produced in Sind in the future and to organise the marketing of these improved varieties in the interests of the cotton-growers. It is fortunate that the extension of the cultivation of better quality cottons in Sind coincides with the increasing tendency of Indian mills to spin finer counts and with a considerable growth of interest in Indian cotton on the part of Lancashire spinners. In the opinion of the Chief Agricultural Officer in Sind, the only effective method of propaganda to increase the use of Sind cottons in Indian mills and in Lancashire is to arrange to collect and place in the hands of probable consumers trial commercial consignments of these improved cottons for actual test in

the mills, and, based upon the results of such tests, to establish by official or non-official agency, marketing organisations for the regular supply of standardised and unmixed varieties of cotton sold under recognised trade descriptions and marks. The Indian Cotton Committee of 1919, in the portion of its Report dealing with Sind, stated, "The fact that the full premium was not obtained for the American cotton was due to lack of organisation and had no real relation to the intrinsic merits of the cotton." No change has taken place since this statement was made and the improved varieties of American cotton now being produced in Sind are as far off obtaining an adequate premium over *deshi* or other inferior Punjab American types as in the period referred to in the report of the Indian Cotton Committee, i.e., 1914–1919. The Indian Cotton Committee did not suggest in any great detail the organisation which they had in view to ensure that the price obtained for improved American cottons grown in India should approximate more closely to that warranted by its intrinsic quality and their recommendations in this connection can be summarised as (*a*) the establishment of regular cotton markets on the Berar system, (*b*) an expansion of the co-operative sale movement, (*c*) the conduct of auction sales, under Government agency up to a certain stage after which this work should be handed over to other agencies, e.g., co-operative or private and (*d*) the licensing of gins and presses. The Chief Agricultural Officer in Sind is of the opinion that the time has now arrived when the recommendations of the Indian Cotton Committee of 1919 should be reviewed by a strong and representative Sub-Committee of the Indian Central Cotton Committee to whom should be entrusted the task of examining in detail the existing and possible demands for the various types of cotton produced—or likely to be reproduced—in India and of framing proposals for propaganda and marketing organisations designed to encourage, stimulate and facilitate the use of Indian cottons in India and abroad. Such an overhaul of the marketing system of the various main types of agricultural produce has already taken place in many western countries and "Marketing Boards" have been established to correlate more closely the interests of both producers and consumers. It is submitted that the time is now ripe for similar action with regard to the cotton crop of India.

The Royal Commission on Agriculture in India expressed the opinion that co-operative sale societies might, through time, play an important part in the grading and marketing of agricultural produce and that the Agricultural Departments can assist most effectively in such a development by giving such societies expert aid in the grading of their members' produce. In Sind where no regulated cotton markets exist and where, until very considerable improvement in internal communications takes place, the establishment of such markets is unlikely to occur to any real extent, propaganda work in the direction of improved and organised marketing directed towards the primary producers is unlikely to have any practical results and the establishment of organisations for the co-operative sale of improved cottons presents almost insuperable difficulties. It is suggested that the most hopeful method of advance in this direction in Sind is through the ginning factories—who are largely the buyers of the Sind cotton crop and upon whose methods of dealing with and marketing the crop, the reputation of Sind cottons must mainly depend in the future.

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Summary Proceedings

of the

Twenty-ninth Meeting of the Indian Central Cotton Committee, Bombay,

held on the

28th and 29th August 1934.

Indian Central Cotton Committee.

With the Secretary's Compliments.

Vulcan House, Nicol Road,
Ballard Estate,
Fort, Bombay.

2529 1935

ROYAL ASIATIC SOCIETY BOMBAY BRANCH

INDIAN CENTRAL COTTON COMMITTEE.

29TH MEETING—28TH AND 29TH AUGUST 1934.

(Held at Vulcan House, Ballard Estate, Fort, Bombay.)

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Present :

Dewan Bahadur Sir T. Vijayaraghavacharya, K.B.E., (*President*), Vice-Chairman, Imperial Council of Agricultural Research,

Sir Purshotamdas Thakurdas, Kt., C.I.E., M.B.E., (*Vice-President*), Representative of the East India Cotton Association, Bombay,

B. C. Burt, Esq., C.I.E., M.B.E., I.A.S., Agricultural Expert, Imperial Council of Agricultural Research, (*ex-officio*),

S. V. Ramamurty, Esq., I.C.S., Director of Agriculture, Representative of the Agricultural Department, Madras Presidency,

Dr. W. Burns, I.A.S., Director of Agriculture, Representative of the Agricultural Department, Bombay Presidency,

Khan Bahadur Maulvi Fateh-ud-Din, I.A.S., Officiating Director of Agriculture, Representative of the Agricultural Department, Punjab,

J. H. Ritchie, Esq., I.A.S., Director of Agriculture, Representative of the Agricultural Department, Central Provinces,

H. B. Moore, Esq., Representative of the Bombay Chamber of Commerce,

Chunilal B. Mehta, Esq., Representative of the Indian Merchants' Chamber, Bombay,

F. G. Travers, Esq., Representative of the Karachi Chamber of Commerce,

Seth Sakarlal Balabhai, Representative of the Ahmedabad Mill-owners' Association,

E. J. W. Plummer, Esq., Representative of the Upper India Chamber of Commerce,

Y. G. Deshpande, Esq., Commercial Representative, Central Provinces,

Rao Bahadur G. R. Kothare, M.L.C., Commercial Representative, Central Provinces,

Khan Bahadur Sardar Habibullah, M.L.C., Commercial Representative, Punjab,

Akhil Bandhu Guha, Esq., Commercial Representative, Bengal,

Rao Bahadur M. G. Deshpande, C.B.E., Co-operative Banking Representative,

K. S. Ramaswami Gownder, Esq., Representative of cotton growers, Madras,

M. R. Ry. K. Sarabha Reddi Garu, Representative of cotton growers, Madras,

Sardar Rao Bahadur Bhimbhai Ranchodji Naik, M.L.C., Representative of cotton growers, Bombay Presidency,

Sardar Sampuran Singh, M.L.C., Representative of cotton growers, Punjab,

Mian Nurullah, M.L.C., Representative of cotton growers, Punjab,

N. M. Deshmukh, Esq., Representative of cotton growers, Central Provinces and Berar,

J. B. Deshmukh, Esq., Representative of cotton growers, Central Provinces and Berar,

Nizam-ud Din Hyder, Esq., Director of Agriculture, Representative of the Hyderabad State,

C. V. Sane, Esq., Director of Agriculture, Representative of the Baroda State,

H. H. Pandya, Esq., Director of Agriculture, Representative of the Gwalior State,

D. N. Mahta, Esq., Economic Botanist for Cotton, Central Provinces,

S. S. Salimath, Esq., Deputy Director of Agriculture, Southern Division, Dharwar,

Musahib-i-Khas Bahadur S. V. Kanungo, Finance Minister, Representative of the Indore State,

Seth Isserdas Varindmal, Representative of the Indian Merchants' Association, Karachi,

P. B. Richards, Esq., I.A.S., Entomologist to Government, United Provinces,

Khan Saheb Farrukhbeg Sadikalibeg Mirza, Nawabshah, Sind,

Lala Shri Ram, Representative of the Cotton Millowners of Delhi,

The Secretary (P. H. Rama Reddi, Esq., I.A.S.),

The Officiating Director, Technological Laboratory (R. P. Richardson, Esq.), and

The Publicity Officer (R. D. Mihra, Esq.).

By invitation.

Mr. T. C. S. Jayarutnam, I.C.S., Director of Land Records, Central Provinces,

Mr. P. M. Joseph, Deputy Director of Statistics, Department of Commercial Intelligence and Statistics, Calcutta.

Mr. A. K. Yegna Narayana Iyer, Director of Agriculture, Mysore State,

Mr. M. D. Williams, British Cotton Growing Association (Punjab), Ltd., Khanewal,

Rai Saheb Thakur Ram Prasad Singh, Economic Botanist to Government (for Cotton), United Provinces,

Mr. B. S. Patel, I.A.S., Deputy Director of Agriculture, Gujerat,

Mr. J. B. Hutchinson, Geneticist and Botanist, Institute of Plant Industry, Indore,

Mr. C. G. Paranjpe, Agricultural Engineer to the Government of Bombay,

Mr. B. P. Deshpande, Cotton Entomologist, Broach,

Dr. V. N. Likhite, Officer in charge, Cotton Root Rot Scheme, Baroda.

Letters and telegrams were received from the following members regretting their inability to attend the meeting :—

The Director General of Commercial Intelligence and Statistics, Calcutta,

Mr. S. D. Saklatvala, Representative of the Bombay Millowners' Association,

Mr. J. Nuttall, Commercial Representative, Madras,

Rao Bahadur C. S. Shirahatti, Representative of cotton growers, Bombay Presidency,

Khan Bahadur Maulvi Mohammad Obaidur Rahman Khan, M.L.C., Representative of cotton growers, United Provinces,

Rai Bahadur Lala Anand Sarup, M.L.C., Representative of cotton growers, United Provinces,

M. R. Ry. V. Ramanatha Iyer, Avl., Cotton Specialist, Coimbatore,

Mr. W. J. Jenkins, I.A.S., Chief Agricultural Officer in Sind,

Khan Bahadur Nawab Fazl-i-Ali Khan, Chairman, District Board and President, Central Co-operative Bank Ltd., Gujrat (Punjab).

President's Speech.

Gentlemen,

I have great pleasure in welcoming you to the 29th meeting of the Indian Central Cotton Committee.

We miss a familiar figure in the person of Sir Manmohandas Ramji who was a co-opted member of your Technological Research Sub-Committee as a representative of the Bombay Millowners' Association. Of his many-sided activities, of his independence of thinking and of the value of his contribution to the public life of the country in general, and to that of Bombay in particular, it is hardly necessary to remind you. I am sure you will ask me to express on your behalf our sorrow at the close of a life full of years and honour.

I desire to offer our congratulations to Mr. W. Roberts who has been honoured with the title of C.I.E.

I also desire to extend a cordial welcome to Seth Sakarlal Balabhai in the place of Seth Naranlal Jivanlal, to Mr. K. S. Ramaswami Gownder in the place of the Honourable Mr. V. C. Vellingiri Gownder, to Mr. Akhil Bandhu Guha in the place of Mr. Nalini Ranjan Sarkar, to Mr. F. G. Travers in the place of Mr. G. C. R. Coleridge who resigned shortly after his appointment in the place of Mr. J. O. G. Barnes, to Mr. Nizamud Din Hyder in the place of Mr. B. A. Collins, to Mr. S. S. Salimath as an additional member in the place of Dr. Burns, who now represents the Bombay Department of Agriculture, and to Seth Isserdas Varindmal in the place of Mr. Girdharlal B. Kotak. We are glad to see in our midst Mr. A. K. Yegna Narayana Iyer who has succeeded Dr. Coleman as head of the important and progressive Department of Agriculture in Mysore.

Our policy of encouraging the replacement of short staple cotton by medium and long staple cotton is steadily extending and the agenda of this meeting bears abundant testimony to this. The events of last year have emphasised the wisdom of this policy and there are gratifying signs that it is winning public recognition. You will all remember the full-dress debate that took place at our last meeting on the comparative merits of 1A and 1027 A.L.F. in South Gujerat. A controversy that had been going on for over five years was finally settled so far as our Committee was concerned by the decision that 1027 only was to be recognised. The Sonsek Group of Co-operative Societies which had set their face against 1027 from the beginning have in the current year taken 1027 seed in large quantities and have come into the scheme of seed distribution we sanctioned in our January meeting and formed a seed group from amongst themselves. I should like, if I may, to pay a tribute to the firmness of the Indian Central Cotton Committee in this matter and to the admirable zeal of the Bombay Agricultural Department which have produced this successful result. As a supplement to the 1027 seed distribution scheme two schemes are before you for subsidising efforts on the part of the Bombay and Baroda Departments of Agriculture to eliminate Goghari from their respective areas.

The extension of the area under Verum cotton in the Central Provinces is another step in the same direction. At its last meeting the Agricultural Research Sub-Committee asked the Central Provinces Department of Agriculture to put up a seed scheme for a period of five years instead of the usual yearly request for assistance which had been the practice hitherto. The Local Government have agreed to finance the scheme for this period by an annual recurring advance of two lakhs of rupees. On our part the Agricultural Research Sub-Committee has recommended that we should assist what is partly a marketing scheme and partly a seed scheme in order to ensure a reliable supply of pure seed and to the farmer a proper premium. It has been locally ascertained that the seed not sold through the pools supervised by the Agricultural Department was practically all adulterated and that the sellers did not obtain anything like the premium they would have got if they had sold through the pools. The merits of the scheme are therefore obvious.

In the same connection I must invite your attention to the important proposal made by the Special Sub-Committee which you have appointed to deal with the question of developing wider markets for Indian cottons. The Sub-Committee recommended that a compact area capable of growing 300,000 acres of cotton should if possible be reserved for long staple cotton in the Barrage areas of Sind. The recommendation has been examined with great care and in full detail by the Chief Agricultural Officer in Sind whose considered note is now before you. As you will see he is in full sympathy with the underlying objects of the Resolution which are to organise and control development of long staple cotton cultivation in the Barrage areas and the establishment and maintenance of a reputation for the purity and quality of the Sind-American cotton crop among consumers both in India and abroad. But he points out difficulties in the way of setting up a compact area of the nature proposed. Of all places in India, Sind offers the greatest scope for the production of long staple cotton. There is an assured demand for it and it could replace the bulk of the cottons now imported from America and Africa for spinning finer counts. I am sure the question will receive your most careful attention.

The problem of supplying the demand both in India and abroad for pure, reliable staple cottons has brought to the front the old question of the licensing of gins and presses. As long ago as 1924 the Indian Central Cotton Committee recorded its opinion that this provided the only effective solution of the evil of the mixing of inferior cottons with the Punjab-American cotton. The resolution however did not find favour and we tried other remedies which did not involve legislative action. We set up a Special Sub-Committee to deal with malpractices but by 1933 it was clear that the limit of voluntary action had been reached and that without a clause in the Cotton Ginning and Pressing Factories Act to provide for licensing, the evil could not be met. We accordingly re-affirmed in August 1933 our resolution of 1924 and this is under the examination of the Government of India. Meanwhile events have been moving fast. A representation was received by our Committee in March of this year from about forty leading cotton merchants and firms in Bombay drawing attention to the increasing malpractice of watering cotton and asking for immediate legislative action. About the same time the Central Provinces Board of Agriculture pointed out that adulteration was depriving the grower of long staple cotton of the full benefit he was entitled to get in the shape of an enhanced premium and that this stood in the way of expansion and suggested the same remedy. Representations to the same effect followed from the Bombay Millowners' Association and from the Bombay Chamber of Commerce. Our Local Sub-Committee considered these documents and asked the Vice-President to hold a conference of the interests concerned and a resolution prepared by this conference drawing attention to the " dangerous " increase in the evil of watering of cotton and asking for immediate action in the interests of Indian cotton is coming up before you for discussion.

I am afraid, Gentlemen, I have already exceeded the limit of time I have set to myself and must close with a bare mention of the report of the Special Meeting of the Agricultural Research Sub-Committee which at your instance has reviewed all the research schemes financed in the past from our funds. It has been a valuable inquiry and has resulted in important suggestions for the future.

SUBJECT 2.—*Confirmation of Minutes.*

The Minutes of the previous meeting were confirmed.

SUBJECT 3.—*Comments of the Government of India on the Annual Report of the Committee.*

The Secretary's note* was recorded.

SUBJECT 4.—*Changes in the personnelof the Committee and Sub-Committees.*

The Secretary's note* was recorded.

SUBJECT 5.—*Appointment of cotton growers' representatives on the Committee to the Board of Directors of the East India Cotton Association.*

Referring to the three places to be filled by election on the Committee of the Board of Directors of the East India Cotton Association, the *President* said that the sitting members were Messrs. N. M. Deshmukh, Mian Nurullah and Sardar Rao Bahadur B. R. Naik and that a ballot would be held if there were more than three members. On the *Vice-President* proposing the re-election of the three members and being seconded by *Rao Bahadur G. R. Kothare*, the motion was carried.

Mr. N. M. Deshmukh, drawing attention to the scheme of hedge contract mentioned in his report as having been placed before the East India Cotton Association, moved a resolution urging upon the Association the acceptance of the "Quality Staple Contract" introduced by him. Explaining the need for this introduction, *Mr. Deshmukh* recalled its inception at the instance of the Board of Control appointed in 1918 to control prices. Prices had since gone down and the present position was that in spite of the Committee's efforts at introduction and development of vast areas of stapled cotton, the trade did not appreciate the importance of these new varieties. The East India Cotton Association had received several complaints to the effect that, under the present system, proper hedging facilities did not exist for improved cottons like those produced by the Hubli and Gadag Co-operative Cotton Sale Societies and that the growers suffered consequently. In the circumstances, the creation of a new Hedge Contract for cotton of $\frac{7}{8}''$ and longer staple was the only desirable alternative. He had accordingly framed

* Not printed.

a scheme called the "Quality Staple Contract" and placed it before the East India Cotton Association. To forestall the possibility of its going the way of the Southerns Contracts, he suggested that all cottons of $\frac{7}{8}$" staple which were at present tenderable under the Broach Contract should be taken out of the contract and put under the new contract. His scheme was accepted by the Hedge Contracts Committee and was now before the Board of Directors. His intention in moving the resolution was to enlist the full support of the Committee in order to facilitate its smooth passage into the bye-laws of the Association.

Mian Nurullah seconded the resolution.

Sardar Rao Bahadur B. R. Naik thought the new contract would be in the interest of the grower but wished to know from the trade members if the proposal was a practical one. He was told that Navsari cotton which was $\frac{7}{8}$" was a check on Broach Contract, but he did not mind Navsari cotton being made tenderable under the new contract, provided it did not prove a dead contract after once being created. *Mr. Chunilal B. Mehta* said that there has been great divergence of opinion, as to the benefit to the growers, on this question of widening or narrowing of hedge contracts. There was no unanimity of opinion even among growers themselves and immense harm could be done to the grower by widening a contract and making more growths tenderable against it, as buyers were reluctant to offer higher prices for a cotton which might be anything in a wide range of cottons tenderable against the contract. Widening of contracts would, therefore, only depress the contracts. He felt sure that Mr. Deshmukh's resolution would be carefully considered by the East India Cotton Association and that the purpose of the Committee could be served by sending them the discussion on the subject instead of a formal resolution.

Seth Sakarlal Balabhai thought that the new contract was unworkable, as stapled cotton was mostly purchased direct from cotton growing centres. Any new contract would benefit the growers only if it was traded in.

Mr. Travers declared that his own firm sold only recently many thousands of bales of staple cotton at Rs. 70 "ON" Broach, which was the basis of selling stapled cotton at present. He did not think growers would benefit under the system of Hedge Contracts, except on occasions when there was no demand from consumers for staple cotton. There was not enough staple cotton to meet even the demands of the Indian mills and a hedge contract merely proved a gambling medium of protection to the trade. He had little doubt that the East India Cotton Association would protect the interest of the grower, in the event of a suitable suggestion going to them, but he did not think that contract could be so shaped as to benefit the growers. *Rao Bahadur Kothare* too had his personal experience as a buyer of Verum cotton to make him think that the proposal had better wait till more staple cotton was grown in India. *Seth Isserdas Varindmal* thought that as a general practice it was undesirable to have many contracts, and that long stapled cottons like 289F fetched a premium of Rs. 3 to Rs. 4 per maund for quality.

The *Vice-President* thought that the discussion was raised for the benefit of the Board and General Body of the East India Cotton Association when they took up the proposal for consideration. However it was sought to give up Broach Contract in favour of the one now proposed, which was outside the competence of the Committee which had no power of enforcing trading in it anywhere. In the circumstances, Mr. Deshmukh had gone a little too far and was better advised to withdraw the resolution. At the most, this resolution could be put forward if it were a unanimous opinion of growers, but the present proposal represented the version of only one side. The bulk of the task of marketing cotton through its various vicissitudes devolved on a variety of agencies other than the growers and unless these people were satisfied, the acceptance of this resolution was fraught with danger to the structure of cotton marketing in India. The Broach Contract was rooted in years of tradition and its relation to world cotton prices and trade conditions provided a barometer. Since 1918, the contract was progressively made to accommodate other varieties of cotton and was used more for hedging than for actual tenders. He feared that as a consequence of this new contract making only staple cotton tenderable against it, prices would be thrown out of joint and it would not be advantageous to the growers of cotton as a whole so long as the contract did not include a fair bulk of the average Indian crop. He thought it therefore inadvisable that the Committee should be a party to a measure of this kind and urged Mr. Deshmukh to withdraw the resolution. *Sardar Rao Bahadur B. R. Naik*, after hearing the opinion of the trade members, urged Mr. Deshmukh to withdraw his resolution and suggested that the discussion on the subject be sent to the East India Cotton Association. He declared that the success of measures of this kind depended on the co-operation of all the various agencies of the trade and in its absence no one stood to gain. The Committee had no right to enforce a measure to which the trade was averse and unless they were able to convince the trade that the measure was as much in their interest as in the interest of the growers, it was no use pressing further with the measure. He however promised support to Mr. Deshmukh in the East India Cotton Association if he agreed to drop the matter from the Committee.

Mr. Deshmukh replying to criticisms maintained that the measure as formulated was intended to accommodate only cottons of $\frac{7}{8}$" and above and not to prejudice the Broach Contract, and as for the brokers who were the principal party affected by it, he quoted a letter from the Bombay Cotton Brokers' Association in favour of more contracts.

The *Vice-President* warned Mr. Deshmukh against accepting the views of the Association indiscriminately and referred him to the details of the proposal in the East India Cotton Association. Mr. Deshmukh while maintaining his case agreed to withdraw the resolution in view of the differences of opinion.

SUBJECT 6.—*Mixing of Verum with ordinary Jari cotton.*

Mr. Ritchie, referring to the resolution proposed under Subject 9, regarding the malpractice of watering cotton, said that mixing of Verum cotton with Jari was an equally serious evil and if the extension of Verum cotton was to be a success, he suggested that the Government of India be requested to introduce a permissive clause in the Cotton Ginning and Pressing Factories Act to enable local Governments to take whatever action they deemed necessary. He had consulted the Central Provinces Government, and he was informed that the resolution of the Central Provinces Board of Agriculture was not forwarded to the Government of India, as they felt that the question was a thorny one and required great care for its elucidation. He wished, therefore, that the Resolution under Subject 9 were extended to cover other malpractices as well.

SUBJECT 7.—*Representation of cotton interests in Karachi on the Indian Central Cotton Committee.*

The *President* said that the Government of Bombay had suggested an alternative nomination of a representative of the Karachi Indian Merchants' Association and the Buyers' and Shippers' Chamber instead of the continuous representation of the former and had asked the opinion of the Committee.

Seth Isserdas Varindmal pointed out that the Buyers' and Shippers' Chamber was represented on the Karachi Indian Merchants' Association and that therefore it required no separate representation. Mr. Jenkins also shared this view. The *President* remarked that since the interests of the Buyers' and Shippers' Chamber had been merged in the other three trade bodies in Karachi, Mr. Jenkins was definitely against any sort of representation to this Chamber. His resolution to accept Mr. Jenkins' proposal was seconded by *Seth Isserdas Varindmal* and carried unanimously.

SUBJECT 8.—*Resignation of Mr. D. F. Kapadia, Assistant Technologist, Technological Laboratory.*

The *President* suggested leaving the question of leave and Provident Fund due to Mr. Kapadia and the action to be taken on his representation to a small Sub-Committee consisting of the President, Vice-President, Rao Bahadur M. G. Deshpande and Khan Bahadur Sardar Habibullah to be finally disposed of by the Standing Finance Sub-Committee. The *Vice-President* urged that the matter might be finally disposed of by the full Committee. The *President* had no objection to this course. A resolution proposed by the *President* and seconded by *Sardar Rao Bahadur B. R. Naik* for the appointment of a Sub-Committee with the abovementioned personnel to examine the allegations made by Mr. D. F. Kapadia and to report to the next meeting of the full Committee was carried.

SUBJECT 9.—*Licensing* of gins and presses.*

The *Vice-President,* drawing attention to the resolution passed in August 1933 regarding the licensing of gins and presses submitted to the Government of India, observed that the malpractice of watering cotton was growing as was evident from the requisition sent to the Committee by the trade in Bombay. There was some difference of opinion on the question of licensing gins and presses but none on the question of stopping the evil. Before moving the resolution at this full meeting he had taken care to see that it reflected the general opinion of the whole community concerned. To that end, with the Local Sub-Committee's consent, he had sought to enlist the assistance of the Presidents of the Millowners' Associations of Bombay and Ahmedabad, the Bombay Chamber of Commerce, the Indian Merchants' Chamber and the East India Cotton Association in drafting the resolution reminding the Government of India of the Committee's resolution of August 1933 and drawing the attention of the Government to the dangerous increase in the evil of watering cotton which called for immediate action in the interest of Indian cotton. He pointed out that unless the resolution of August 1933 was rescinded, the Committee was supposed to stand by it and bound to draw Government's attention to it. The evil, he said, starting in Berar, Central Provinces and Khandesh, was rapidly spreading. Those who had opposed the resolution of August 1933 could not be supposed to be changing their attitude merely by supporting the present resolution. *Sardar Rao Bahadur B. R. Naik* seconded the resolution. *Rao Bahadur G. R. Kothare,* though sharing their disgust at the evil was against any legislative interference and, in view of the August 1933 resolution, thought the present resolution unnecessary. The *Vice-President* stressed the need to elicit the views of the Government of India and said that merely reminding the Government did not commit individual members to the Committee's views. *Rao Bahadur G. R. Kothare* in reply said that the Committee should consider how legislation of the type would affect the gins and presses. He pointed out that the signatories to the requisition were themselves buyers of this cotton and could put a stop to the practice if they so willed. He thought that the penalty attaching to malpractices in the ordinary course of business was enough deterrent. He therefore suggested that instead of urging legislation, it would be better to consult big businessmen to devise means to discourage the evil. *Mr. Y. G. Deshpande* also shared Rao Bahadur Kothare's misgivings in regard to legislation and thought that the personal influence of the Vice-President with the signatories might be used to convince them of the need for ending the evil. *Lala Shri Ram* remarking on the inadequacy of the contemplated measure said that benefits from this evil practice would not be enduring and would harm the interests of the agriculturists through the discredited reputation of Indian cotton. He urged all necessary steps on Government.

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* Appendix I (page 49).

Rao Bahadur M. G. Deshpande agreed with the President's suggestions that the plea that cotton was watered at the bidding of merchants was too lame to bear examination. Supporting the latter part of the resolution, *Seth Isserdas Varindmal* declared that the Karachi Cotton Merchants were against licensing. Pure Punjab-American cotton failed to sell in the market unless mixed to some extent. He shared the apprehensions of other members that the practice constituted a grave danger to the reputation of Indian cotton at home and abroad. He suggested that the ginners were not entirely to blame. *Sardar Rao Bahadur B. R. Naik* pointed out the compromise effected in drafting the latter part of the resolution and said that in view of the obvious danger arising from the practice, it would not do to seek to fasten the blame. Foreign Governments had taken legislative action to maintain the reputation of their cotton and the grower who, it was admitted, did not water the cotton, should not be made to suffer for the sins of others. He therefore supported the resolution. *Mr. Burt*, speaking next, expressed surprise that a commercial representative from Karachi should be unaware of the concensus of opinion in the Karachi cotton trade in favour of licensing. He recalled the offer of one of the biggest users of staple cotton in Bombay to make a contract for years ahead for 50,000 bales of 289F per annum, if guaranteed to be unmixed and thought that Seth Isserdas Varindmal, as a Karachi representative, ought to place before the Committee the recommendation of the Karachi Cotton Association, for licensing gins and presses, which was carried by a majority of 10 to 2 by the Sind Cotton Committee. *Mian Nurullah* supporting the resolution commented on its merits and observed that the growers had no hand in the malpractice.

Sardar Sampuran Singh pointed out the duties of the Committee to preserve the integrity and reputation of Indian cotton at home and abroad and recommended preventive legislative measures to ensure that their efforts bore fruit. *Seth Sakarlal Balabhai* also brought in fresh evidence of the insidious ways which adulteration took and said that if the Commission agents were not the actual culprits, they were abettors. He thought that legislation was necessary.

The *Vice-President* summing up said that there seemed to be unanimous agreement on the latter part of the resolution which was the really operative part. Rao Bahadur Kothare though opposed to legislation was unable to suggest any alternative and they could not lay much store by moral pressure. In view, therefore, of the widespread feeling against the evil, he thought that to urge legislation upon Government seemed to be the only alternative. Answering Rao Bahadur Kothare's question as to who profited by the adulteration, he said that though the grower shared some of the profit, the greater effect of this short-sighted policy was ultimately detrimental to his own interest. He was not an all-round admirer of Indian States' administration, but he had successively to point out to the efforts made by Indian States for effecting improvement in Indian cotton. He instanced the firm hand taken by Mr. Collins of the Nizam's administration to stamp out this evil with entire success.

On the *President* putting the resolution to vote, it was unanimously carried.

SUBJECT 10.- *Clean picking of cotton- Replies from Directors of Agriculture.*

The *President* said that the replies received from the Directors of Agriculture showed that clean picking of cotton did not pay the cultivator. These replies were only for information.

SUBJECT 11.—*Cotton Marketing—Organisation of regulated cotton markets under the Bombay Cotton Markets Act.*

The Secretary's note* was recorded.

SUBJECT 12.—*Cultivation† of improved varieties of cotton in the Barrage areas of Sind—Note by Chief Agricultural Officer in Sind.*

The *President* remarked that as Mr. Jenkins was unable to attend due to ill-health, they could proceed with the subject as the note put up by him made the matter clear.

Mr. Burt, referring to the resolution passed by the Special Sub-Committee set up for the purpose of finding wider markets for Indian cottons, said that the resolution drew the attention of the Government of Bombay to the urgent need of a proper cotton policy in Sind and the establishment of a compact block of 300,000 acres under long-staple cotton. Recalling the discussion at the Karachi meeting in February 1933 and the view of the Karachi cotton trade that Sind should grow no more than 200,000 bales of short-stapled cotton, he appreciated the wisdom of the advice from the trade which was now apparent in view of the shrinking demand for short-staple cotton. On the other hand the demand for staple cotton had increased and the Indian mills, unable to buy their requirements at home, were importing large quantities of foreign cotton. The examples set by other countries like America and Egypt and even Rajpipla nearer home to maintain one variety were a sure guidance. Giving reasons for recommending for Sind a course which the Committee had not done for the Punjab, he said that the Punjab growers had failed to maintain one pure variety of the highest quality from the very start. The problems of 1934 were quite different from those of years ago. Page 5 of Mr. Jenkins' note which gave figures of the respective acreage for American and *Desi* cottons indicated that the Thar and Parkar District already maintained a large area under staple cotton and it would not be difficult to develop 300,000 acres of long-staple cotton in a compact block. The problem of mixing would not arise with the block of a nature suggested by the Committee. Proper legislation after that devised in Madras could prevent mischief on the part of the minority. The supply of pure seed was an important question

* Not printed. † Appendix II (page 53).

and he had no hesitation in recommending Mr. Jenkins' proposals for a compact block to the Committee.

Seth Isserdas Varindmal drew the attention of the Committee to the case of Samrao Taluka where *Desi* cotton was grown side by side with American and observed that cultivators grew varieties suited to the conditions of soil and climate. He deprecated the idea of reserving blocks of particular varieties and said that what was unsuitable for the Punjab was equally so for Sind. He feared that the result of following that policy would be to oust the small cultivators and favour big *zamindars.*

Mian Nurullah, congratulating Mr. Jenkins on the lucid note put before the Committee, recalled the recommendations of the Indian Cotton Committee of 1919 regarding the vast possibility of growing long-staple cotton in Sind. Mr. Jenkins' note graphically illustrated this possibility. They had the assurance of a growing demand for staple cotton and conditions in Sind were different from those of the Punjab where they were confronted with settled conditions. The proximity of the Karachi port was another advantage. Referring to Mr. Jenkins' suggestions contained in paragraph 16, he suggested the drawing up of a scheme by the Chief Agricultural Officer in Sind in collaboration with the Publicity Officer of the Committee, by which big farms of 4 to 10 thousand acres could be started and given to private individuals for the production and distribution of seed. He thought that private farms commanded more popular interest than Government farms and with Co-operative Banks and Loan Societies with *zamindars* as shareholders he felt no doubt that the proposal would be a success.

Mr. Burt, in reply to a question from the Vice-President, said that the Bombay Government should be informed that the Committee fully endorsed the resolution of the Special Sub-Committee. *Sardar Sampuran Singh,* next speaking, pointed out that in the Punjab the holdings were small whereas in the Barrage areas they were large and owned by substantial individuals and the uniform nature of the Sind soil was more suitable for long-staple cotton. He disagreed with Mr. Jenkins' statement that *Desi* cotton should be assessed at an enhanced rate and suggested that in view of its lesser need and lower prices it would be an injustice. He, however, commended the rest of Mr. Jenkins' proposals.

Mr. Chunilal B. Mehta, referring to paragraph 9 of Mr. Jenkins' note in which co-operation and possible coercion of growers in the cultivation of a particular type of cotton was suggested as a means, declared that he could on no account advocate a measure which forced the hands of the cultivators to a particular variety without the option of measures against possible failures.

Khan Bahadur Sardar Habibullah denied any intention on the part of the Special Sub-Committee to coerce farmers. The proposals aimed at providing facilities to growers who wanted to sow long-staple cotton. From his own experience he could maintain that long-staple cotton could be extended in many places where it is new. Propaganda and

inducement would help to achieve success in this direction especially in the case of Sind where tracts were being newly opened up. He thought Mr. Jenkins' suggestion very valuable and if the Bombay Government adopted them and provided certain facilities the Committee's object would be achieved.

Lala Shri Ram, in view of fears expressed by Seth Isserdas Varindmal, thought that the Bombay Government should be advised to take particular care of the interests of small *zamindars* and thought that the resolution on encouraging long-staple cotton should receive the whole-hearted support of everybody.

Seth Isserdas Varindmal rejoinding said that he had nothing to say against long-staple cotton as such but thought that the reservation of areas for particular cottons would encroach on the freedom of the growers.

Mr. Burt moving the resolution **"that the Indian Central Cotton Committee endorses the resolution of the Special Sub-Committee regarding the establishment of a compact block of long-staple cotton in Sind and approves generally of the proposals of the Chief Agricultural Officer in Sind"** made it clear that the Committee in formulating the proposal had in mind the interests of the average cotton growers. Referring to Mr. Chunilal B. Mehta's suggestion about the undesirability of legislative interference with the freedom of the growers, he pointed out that Mr. Jenkins had expressed his conviction of establishing a block of long-staple cotton in Sind without any further legislative action. Neither was the Sub-Committee committed by its resolution to any particular method. It had called for co-ordinated effort and had declared itself in favour of legislation only as an eventuality. The Committee had now only to endorse the resolution and Mr. Jenkins' proposals. It was seconded by *Khan Bahadur Sardar Habibullah* and carried unanimously.

SUBJECT 13.—*Campaign for extension, seed distribution and marketing of pure Sind-American cotton.*

On the suggestion of Mr. Burt that the Secretary's suggestion be adopted, the *President* proposed the following resolution :—

RESOLUTION—"That the various suggestions of the Sind Cotton Committee be referred back to the Chief Agricultural Officer in Sind for reconsideration by the Sind Cotton Committee with the object of ascertaining to what extent any of the suggestions made could be given effect to."

This was seconded by *Mr. Burt* and carried.

SUBJECT 14.—*Half-yearly Report* of the Publicity and Propaganda Officer.*

Seth Isserdas Varindmal spoke of the work of the Publicity Officer at Karachi and Sakrand and other stations in the desert of Sind which he had frequently visited, and said that in view of the good work he was doing the Publicity Officer should be made permanent.

*Appendix III (page 66).

Rao Bahadur G. R. Kothare and *Khan Bahadur Sardar Habibullah* variously commented on the importance of publicity to the work carried on by the Committee and the excellent work among the agriculturists done by the Publicity Officer. The extension of propaganda activities among the growers in the Central Provinces was also advocated.

Sardar Rao Bahadur B. R. Naik recalling the hesitation with which the department was opened declared that Mr. Mihra had since proved its usefulness and had brought home to the agriculturists of the country by his propaganda through leaflets and the press the importance of the work which the Committee was doing. He thought with others who had spoken before him that the Department and the Publicity Officer should be made permanent.

The *President's* resolution for the adoption of the report of the Publicity and Propaganda Officer was seconded by *Sardar Rao Bahadur B. R. Naik* and carried unanimously.

SUBJECT 15.—*Report on the Fumigation of American Cotton.*

The President proposed the following resolution which was seconded by *Mr. Chunilal B. Mehta* and carried :—

RESOLUTION—"The Indian Central Cotton Committee approves of the action taken by the Standing Finance Sub-Committee in regard to the question of the reduction of the Bombay Port Trust share of fumigation charges and the revision of the pay and allowances of the fumigation staff."

"The Indian Central Cotton Committee requests the Government of India to sanction a rebate of 8 annas per square bale and 5 annas per round bale on the fumigation fee paid on American cotton fumigated at square bale and round bale rates during the fiscal year 1933-34."

"The Indian Central Cotton Committee approves of the action taken by the Local Sub-Committee in recommending to the Government of India the abolition of the special fee of Rs. 10 for sample bales."

SUBJECT 16.—*Provincial Cotton Committees—Proceedings of the Sind Cotton Committee.*

The Secretary's note* was recorded.

SUBJECT 17.—*Summary of Proceedings of the Local Sub-Committee.*

The Secretary's note* was recorded.

* Not printed.

SUBJECT 18.—*Report of the Cotton Forecast Improvement Sub-Committee.*

In proposing the adoption of the Report of the Cotton Forecast Improvement Sub-Committee, *Seth Isserdas Varindmal* pointed out the inaccuracies in the area and yield figures for Sind published in the last forecast and suggested that the practice followed in America, with good results, might be followed in India also. The *President* in reply said that the illiteracy of the Indian cultivators made a difference from the American case where information was collected from the cultivators. *Mr. D. N. Mahta* replying to Rao Bahadur G. R. Kothare said that the distinction in the trade classification for Indian cottons between C. P. Verum and Berar Verum was made because of the former's superiority in spinning quality due to differences in climate and soil. The resolution proposed by the *President* and seconded by *Seth Isserdas Varindmal* was carried.

SUBJECT 19.—*Schemes of the Committee—Report* of the Special Meeting of Agricultural Research Sub-Committee.*

Dr. Burns, referring to the Special Meeting of the Agricultural Research Sub-Committee, dwelt on its usefulness and said that the labours of similar previous Sub-Committees and its own previous discussions in examining and overhauling its research policy should be a guide to the Committee against spending money unnecessarily on the same trials. He, however, thought that in view of the fact that the Committee examined and criticised each scheme at every stage, it should make its conclusions on the results with this in mind. For instance, the Surat Physiological Scheme was started in the hope of increased yield by stopping shedding of buds, flowers and bolls. Researches had shown, however, that shedding was a normal life process in the plant. But they had also added to our knowledge as to what caused shedding and the amount of incidental loss. Similar discoveries relating to nourishment of plants at suitable times in the form of a suitable manure had also enabled us to determine how best to provide nourishment to ensure increased yield. These results, though not of immediate practical value, were important. He therefore proposed suitable amendment to the statement in the report relating to the results of the schemes. *Mr. Hutchinson* seconded the resolution. *Mr. Richards* agreeing with the amendment said that the decisions taken at the Special Meeting were not unanimous and were based on the score of the immediate cash value of the results of the schemes to the grower. From the scientific aspect, the schemes have yielded important results and were calculated to save unnecessary work for other workers. The *Vice-President* in reply made it clear that the trade supported Cotton Cess in the hope of getting something tangible done within a measurable period. Whatever the scientific value of results, the main expenditure of the Committee must be on such work as would bear fruit within a reasonable time. *Khan Bahadur Sardar Habibullah* also shared the views of the Vice-President

* Appendix IV (page 73).

and remarked that the general public including the growers and the trade were looking to the material results of the schemes. From the practical point of view very few schemes could be said to have given good results and, Indore apart, the Committee was not designed as a scientific body but was more interested in productive results to the agriculturists. He therefore thought that a radical change in the system of granting schemes was called for. The *Vice-President* did not, however, agree with the speaker in regarding the results as altogether disappointing. The Committee had built up a good record during the last 13 years and though the practical results of its schemes had fallen short of expectations experience will guide in the direction of more practical undertaking than has hitherto been the case. If members wanted more time to study the report the subject could be placed on the agenda of the next meeting. He also invited suggestions and criticisms from members. Replying to Mr. Richards' suggestions he also agreed to circulating a resumé of the discussion along lines suggested by Mr. Richards. The *President* informed Khan Bahadur Sardar Habibullah that the minutes of the Special Meeting of the Agricultural Research Sub-Committee had been placed before the Agricultural Research Sub-Committee at its last meeting but objection was raised to its circulation, on the ground that the Vice-President at the Special Meeting had suggested that no record of formal minutes need be kept. Though the suggestion has not been endorsed by the President he agreed that the Vice-President's remarks might have conveyed the impression that no formal minutes would be recorded. The matter on being put to vote was carried accordingly. He also said that the amendment proposed would be placed before the next meeting of the Indian Central Cotton Committee and Mr. Richards' request, as modified by the Vice-President, would be acceded to. *Mr. Chunilal B. Mehta* supported the postponement. The *Vice-President* said that the full Committee had only to receive and adopt the report under consideration, subject to such fundamental amendments as the Committee might make. He was anxious that members should have sufficient time to consider the report and accordingly suggested further discussion of the subject. The *President* then proposed to take the several items one after another and began with Dr. Burns' amendment which was carried. Item Nos. 1, 2, 3 and 4 were likewise accepted. When item No. 5 came up for acceptance with a suggestion from Dr. Burns that the Physiological Scheme also be included in it, *Mr. Burt* explained that Dr. McRae had visited Dharwar and Nagpur and after scrutinizing the mycological and entomological schemes in progress had given his opinions. The Sub-Committee had probably in mind that these schemes could be better dealt with by Universities than by Agricultural Departments. He therefore wished that the item 5 might express this idea more clearly. Following Mr. Richards' views that "scrutiny" meant careful examination of monetary value, *Mr. Burt* suggested the addition of "from the economic aspect" after the word "scrutinized". *Mr. B. S. Patel* suggested occasional visits by experts to the schemes to lay down better plans at the end of every 2 or 3 years. *Dr. Burns* proposed the deletion of item 5 altogether. *Mr. Yegna Narayana Iyer* thought that the theoretical aspect

of some problems might be left to Universities while the Agricultural Departments look to the practical parts. The Special Meeting had considered that the schemes when they were sanctioned were not scrutinized sufficiently. This accounted for making greater scrutiny a condition for sanctioning new schemes in the future. *Mr. Burt* thought that the Universities would yield good results and proposed for the second part a resolution regarding the competence of certain Indian Universities and their constituent colleges and the desirability of encouraging them to take up such problems on cotton cultivation as are adapted to their organization and equipment. *Mr. Richards* thought that the report had better stand as it was and the Committee could make its own decisions separately, and replying to Mr. Burt who suggested amendment of the report itself said he only wanted to emphasise the economic aspect of the schemes. *Mr. Chunilal B. Mehta* recalling the discussion at the Special Meeting said that a particular scheme had merely duplicated labour as similar results had been obtained from another scheme. Careful scrutiny would have avoided this error. *Mr. D. N. Mahta* pointed out that item 5 was agreed to by the Special Meeting because the schemes sanctioned were found to have brought no results of immediate money value. That, however, did not mean the scheme was a failure though from the immediate economic aspect it apparently was. The *President's* proposal to delete item 5 was lost. The amendments were accordingly moved and the following decisions were arrived at :—

No. 1.—All entomological, mycological and physiological schemes should be scrutinized more thoroughly from the economic point of view.

No. 2.—Certain Indian Universities and their constituent colleges are now better equipped than formerly for research work in these branches in science and should be encouraged to take up problems bearing on cotton cultivation as are adapted to their organization and equipment. Item No. 6 was carried as also the Sub-Committee's findings on " B " seed distribution and extension. The Publicity Department was to continue at the expiry of its sanctioned period which was approved. Referring to Mr. Roberts' two charges against the Committee that the Hyderabad State was treated very kindly and that the Standing Finance Sub-Committee mismanaged its funds, the *President* said that the verdict of the Agricultural Research Sub-Committee on these points had to be endorsed by the full Committee. The verdict was unanimously endorsed.

SUBJECT 20.—*Institute of Plant Industry, Indore—Future policy.*

Referring to his discussion with the Agent to the Governor-General in Central India and the Prime Minister, Indore State, in accordance with the wishes of the Committee, the *President* said that they were not prepared to concede more than six seats to the Committee, as against the demand of the Committee for seven. The *Vice-President,* recalling the last discussion on the subject, said that the Director's residence to which the Committee was opposed was now a '*fait accompli.*' The Indore

Institute which owed its existence and maintenance to the substantial grants of the Committee had brought no very encouraging results. As against the total grant of Rs. 3 lakhs made by the States, the Committee had given no less than 13 lakhs. Dr. Keen's report furnished convincing evidence of the fact that the Committee's money had not been made the best use of. He would therefore advocate the adoption of such precautionary measures as would prevent repetition of the past. The five-year period for which the Committee had sanctioned its support would terminate with the current financial year, and it was open to the Committee to state the terms on which it was further prepared to make its contributions. Dr. Keen had doubted the possibilities of the Institute as a Central Research Body, but he (Sir Purshotamdas Thakurdas) was willing to risk a little after all that has already been spent on it, to give Mr. Hutchinson the chance he had asked for. He therefore moved a resolution for an annual grant of Rs. 85,000 for research on cotton subject to the approval of the Committee, and another demanding representation in proportion to the contributions received in the preceding year from the Committee, and a third demanding that the accounts of the Institute be audited by the Government Auditor, as long as the Institute received grants from the Committee. In explaining these resolutions, the Vice-President pointed out that the Committee's grants had been found to be more than current requirements and in order to preclude the possibility of the Committee's funds being wasted, he suggested this reduction. The President's demand regarding weightage was extremely reasonable. He did not wish to fix the representation for all time, his alternative was for proportional representation. His resolution in favour of having the accounts of the Institute audited by the Auditor-General meant only a reversion to what had been in vogue in the early years of the Institute. His reason was in the interest of the tax-payer who paid for the Government Audit Department. He was prompted in this by certain information he had on hand which he hoped he would not be compelled to divulge and if the Auditor-General could not arrange for the audit, it was his conviction that the Committee should stop its grants to the Institute. In reply to Mr. Richards, he said that the basis of his estimate in arriving at the figure of Rs. 85,000 was a general consideration of the actual recurring expenditure of the Institute, in the light of the work done. There was, however, nothing to prevent the Institute from obtaining supplementary grants when exigencies justified. He did not expect any inconvenience from the effect of reduction in the grants. *Mr. Hutchinson*, drawing attention to the enlarged research programme, said that the only course open would be to cut down the pay of the staff. The *Vice-President* in reply pointed out that specific proposals for supplementary grants would be looked into on their individual merits. Considering the statement of the Committee at the last meeting, the present grant, *Mr. Chunilal B. Mehta* thought, was generous. *Musahib-i-Khas Bahadur Kanungo* congratulated the President on evolving a working formula for continuing the co-operation between the Committee and the Institute, but he thought the general feeling of dissatisfaction with the work of the Institute was not justified. He shared the Committee's feeling that

tangible scientific results should have been better appreciated, but he thought the proposed measure was too drastic. He therefore suggested that these might be forwarded to the Governing Body as suggestions and that the final decision be taken on receipt of the views of the various States. *Mr. Burt* thought the figure of Rs. 85,000 too low in view of the enlarged programme which the Committee had accepted as satisfactory. He feared that the sudden cut in the grant might hamper research work. In view, however, of the Vice-President's willingness to consider the granting of supplementary grants, he proposed the raising of the figure to Rs. 1,00,000. The proposal that representation on the Governing Body should be according to contributions, he thought, was a sound one. *Mr. Richards* declared that the effect of the reduction would be crippling the work of the Institute and to dispense with a third of its staff was the only course open. He suggested the continuation of the present arrangement till the end of 1935-36 when the question of future grants might then be considered in the light of the actual expenditure in that year and results achieved under the new programme. *Mr. Mahta* suggested that grants might be made on condition that unspent balances in any year should be surrendered to the Committee. *Dr. Burns* shared Mr. Burt's fears regarding the effect of the reduction on the Institute's work and recommended a higher figure. The *Vice-President* replying to the debate assured Musahib-i-Khas Bahadur Kanungo that he had only the best way of serving the Institute in view. Replying to objections to his figure, he said that he had no definite basis for his figures and his only object was to keep the Committee in close touch with the affairs of the Institute, than was the case hitherto. His resolution was no bar to supplementary grants and he laid stress that the Committee retained the power on its purse. He had no objection to add to the resolution a sentence expressing the Committee's readiness to consider supplementary grants. In view of the general agreement on parts 2 and 3 the *Vice-President* said he would put them to vote as items 1 and 2. *Mr. Hutchinson* had no objection to the accounts of the Institute being audited by the Auditor-General. The *Vice-President* had no objection to certain minor amendments suggested by Mr. Burt in paragraph 2 of the resolution and the *President* moved a resolution with Mr. Burt's amendments as a substantive proposition :—

RESOLUTION —"This Committee resolves that the Governing Body of the Institute of Plant Industry, Indore, be informed—

(1) that the representation of the Indian Central Cotton Committee on the Governing Body each year should be in proportion to the contributions received in the preceding year from the Indian Central Cotton Committee and the States taking an interest in the Institute,

(2) that the accounts of the Institute should be audited by the Auditor General as long as contributions from the Indian Central Cotton Committee continue,

(3) that the Indian Central Cotton Committee will contribute to the Institute for a period of three years from 1935-36 a minimum sum of Rs. 85,000 per year for purposes of research work in cotton—the

programme for such work for each year to be approved by the Indian Central Cotton Committee. The Committee will also be prepared to consider applications for supplementary grants for cotton research on the approved programme, if necessary."

Mr. Y. G. Deshpande expressed disagreement with the idea of incorporating in the resolution any promise of further grants but on the *President's* pointing out that Mr. Burt's amendment was the substantive proposition before the house and on the *Vice-President* explaining his reason for accepting the amendment, Mr. Deshpande withdrew his objection. The resolution as moved by the *Vice-President* was put to vote and carried unanimously.

SUBJECT 21.—*Meeting of the Indian Central Cotton Committee at Indore.*

In view of the fact that the Committee's resolution of July 1928 was inconvenient and impracticable, the *President* moved the following resolution :—

RESOLUTION—"That the Resolution of the Committee passed at its meeting in July 1928 requiring a cold weather meeting to be held at Indore once in three years be rescinded. Meetings will be held at Indore as and when the Committee considers it desirable to do so."

This was seconded by *Sardar Rao Bahadur Bhimbhai R. Naik* and carried unanimously. Thereafter *Sardar Sampuran Singh* invited the Committee to hold its next meeting at Lyallpur. *Mian Nurullah* and *Rao Bahadur M. G. Deshpande* supported the invitation, but the *President* thought that meetings outside Bombay caused a good deal of trouble in the past. However the proposal was carried, *Mr. Ritchie* and *Dr. Burns* dissenting.

SUBJECT 22.—*Madras Pempheres and Physiological Research Scheme—Reference from Special Meeting of Agricultural Research Sub-Committee.*

Mr. Ramamurty, with a view to enable the Committee to see the subject in its true perspective reviewed the history of the scheme, from its inception by the Madras Government since 1925. As they failed to secure a suitable Physiologist and a Biochemist from abroad, two officers of the Madras Agricultural Department were, with the approval of the Committee, selected for these posts and sent to England for training. The Bio-Chemist returned from England a year ago. The scheme was reviewed in August 1933, when an extension of the scheme for 5 years was recommended by the Sectional Sub-Committee presided over by Mr. Burt. This obtained the sanction of the Government of India which was in due course conveyed to the Madras Government. Mr. Ramanathan's suggestion for transferring the work of physiology at Indore had obviously given rise to some misunderstanding, which led *Mr. Burt* to suggest the discontinuance of the scheme for the first time in June last. Despite Mr. Ramanathan's protest about misinterpretation of his merely general comment on the desirability of fundamental

work on cotton physiology being taken up at Indore and Mr. Hutchinson's support that physiological work on Cambodia cotton could not be undertaken at the Indore Institute, *Mr. Burt* still found it necessary to suggest in his note to the Special Meeting of the Agricultural Research Sub-Committee that the other part of the scheme *viz.*, the bio-chemical basis of Pempheres resistance should continue at Coimbatore, but he was prepared to drop that part of the scheme which was mainly a Madras problem, especially in view of the fact that the senior officers who would have guided the work were not now available. *Mr. Ramamurty* however assured the Committee that there was no question of dropping the scheme nor was the Madras Government finding any difficulty in carrying out the work at Coimbatore. To cast an aspersion on the competence of the trained junior officers now employed on the scheme or on the Cotton Specialist whose work had been appreciated by three successive Directors of Agriculture was a belated attempt. Mr. Ramanathan had already satisfactorily answered all the questions raised at the meeting. The Committee had a moral obligation to see the scheme through after 8 years of consideration and to drop it now would indicate that the Committee did not know their own minds—a fact which would lose them the confidence of Provincial Agricultural Departments and Local Governments, without whose help the Committee could not hope to function successfully. The issue now before them was not to drop the scheme, because the results so far obtained were unsatisfactory, but how the programme could be modified to achieve the objective in view. *Mr. Burt* at the outset made it clear that the senior officers he referred to were Dr. Norris, Rao Bahadur Vishwanath and Mr. Hilson who were not now in Madras. He fully appreciated the work of Mr. Ramanathan but strongly criticised the newly appointed Bio-chemist. The Agricultural Research Sub-Committee recommended the discontinuance of the bio-chemical research on purely technical grounds that the results did not seem to justify further work. As the Cotton Specialist had now reported that certain strains of Cambodia were not more tolerant to Pempheres, it would be sheer folly to waste more money on it. The Committee could not be expected to tax their limited resources to the utmost limit, irrespective of results obtained, as that would be a very heavy price to pay for the co-operation of the Provincial Agricultural Departments. The Special Meeting of the Agricultural Research Sub-Committee had fearlessly reported on the merits of each scheme and he was of the opinion that physiological work of definite practical application could be started at once. *Mr. Richards* said that at the special and the last meetings of the Agricultural Research Sub-Committee, general opinion was in favour of discontinuing the scheme. As an Entomologist he considered the scheme would produce no results of definite economic value to the cultivator. In reply to Mr. Ramamurty's plea that the scheme had not been criticised previously he thought the only reason for sanctioning such schemes without careful consideration was that the Committee at that time was rolling in money. *Dr. Burns* was in favour of dropping the scheme, if like the Surat Physiological Scheme, it was meant to investigate matters of purely academic value. The *President's* suggestion

that the subject should be gone through by a Sub-Committee composed of Messrs. S. V. Ramamurty, V. Ramanatha Ayyer, J. B. Hutchinson and B. C. Burt whose report should be referred to the next meeting of the Committee was agreed to.

SUBJECT 23.—*Technological Research—Progress Report* of the Director, Technological Laboratory.*

This report which covers the period from November 1933 to May 1934 presents an account of the work done in the Laboratory during those seven months and shows that the Laboratory has once again maintained a high level standard of work done. Compared with the corresponding period of the last year, the total number of samples received at the Laboratory during the period under review showed a decline of 113 samples, the bulk of which were agricultural samples.

The *President* proposed the following resolution :—

RESOLUTION—" That the progress report of the Director, Technological Laboratory, be approved."

This was seconded by *Mr. Burt* and carried.

SUBJECT 24.—*Technological Research—Report of the Technological Research Sub-Committee.*

The report of the Technological Research Sub-Committee approving of the progress report of the Director of the Laboratory and also a grant of Rs. 30,000 for obtaining a report from a Chemical Engineer in Europe or America through the High Commissioner for India on the prospects of the conversion of short staple cotton into suitable fibres was adopted.

SUBJECT 25.—*Agricultural Research—General Progress Report.*

The Secretary's note on the present position of agricultural research and seed distribution schemes was recorded.

SUBJECT 26.—*Progress Report on Surat Boll-worm Clean-up Scheme.*

The report of the Agricultural Research Sub-Committee suggesting an approach to the Government of Bombay to provide either a considerable sum of money for propaganda or for suitable administrative action in order to secure the continuance of the successful control measures under the scheme or to introduce legislation making the adoption of them compulsory was adopted.

SUBJECT 27.—*Progress Report on Broach Cotton Breeding Scheme.*

The report of the Agricultural Research Sub-Committee noting with approval the efforts that are being made to combine by hybridization the high ginning qualities of Goghari and a Viramgam strain with the other required qualities of the Broach *desi* strain, B. 18, was adopted.

* Appendix V (page 76).

SUBJECT 28.—*Progress Report on Jalgaon Cotton Breeding Scheme.*

The report of the Agricultural Research Sub-Committee stating that three promising strains of Neglectum have been selected for rigid yield trials during the next season was adopted.

SUBJECT 29.—*Progress Report on the Scheme for Survey of Small Leaf Disease in Cotton, Bombay Presidency.*

The report of the Agricultural Research Sub-Committee stating that the disease is of widespread occurrence and affects all other cottons except exotics and that its cause is not any parasitic organism was adopted.

SUBJECT 30.—*Progress Report on Sind Physiological Research Scheme.*

The report of the Agricultural Research Sub-Committee stating that item 3 (*b*) is not a very promising line of work, since red leaf is due to a variety of causes and suggesting consultation with the Physiologist of the Punjab before taking up this item was adopted.

SUBJECT 31.—*Progress Report on Madras Herbaceum Scheme.*

The report of the Agricultural Research Sub-Committee that the Secretary and Mr. Hutchinson should be asked to visit Coimbatore and make recommendations regarding the future of the scheme, since the scheme is only sanctioned until May 1935, and the hybrid material has reached only F-4 generations was adopted. *Mr. Hutchinson* explained that the Secretary and himself had been asked to visit Coimbatore not because there was any fault to be found with the scheme but because the scheme was to terminate shortly and future programme had to be decided on. *Mr. Ramamurty* welcomed their visit.

SUBJECT 32.—*Progress Report on Madras Fodder Cholam Scheme.*

The report of the Agricultural Research Sub-Committee concluding that the ill effects of *cholam* on the succeeding cotton crop are not dependent upon the quality of stubbles left in the soil, nor due to its heavy crop of fodder, and that manuring hastens ear production which is not desirable, was adopted.

SUBJECT 33.—*Progress Report on Madras Pempheres and Physiological Research Scheme.*

Mr. Ramamurty remarked that even though he could answer the criticism of the Agricultural Research Sub-Committee, he agreed that they might be referred to the Special Sub-Committee, which was decided upon.

SUBJECT 34.—*Progress Report on Madras Nadam Cotton Breeding Scheme.*

The suggestion of the Agricultural Research Sub-Committee that Mr. Hutchinson and the Secretary should visit the scheme and discuss plans with Mr. Ramanathan when visiting the Herbaceum scheme was accepted and it was decided to await their report.

SUBJECT 35.—*Progress Report on the Punjab Botanical Research Scheme.*

The report of the Agricultural Research Sub-Committee noting with satisfaction the evolution of 3 useful strains of American cotton, one of which N.T. 36-F is of unusual promise, and selection of 5 more new strains of American and one of *desi* cotton for experiments during the year under review was adopted.

SUBJECT 36.—*Progress Report on the Punjab Pink and Spotted Boll-worm Scheme.*

The report of the Agricultural Research Sub-Committee was adopted.

SUBJECT 37.—*Progress Report on the Punjab Cotton White Fly Scheme.*

The report of the Agricultural Research Sub-Committee suggesting that items 1 (1), 1 (3), (*iv*), (*v*), (*ix*), (*x*), (*xi*) and (*xiii*) of the programme of work for 1934-35 should be omitted since either they were academic or impracticable and outside the scheme and that in item 1 (2) it would be better to determine the effect of differential irrigation on infestation and yield of cotton was adopted.

SUBJECT 38.—*Progress Report on the Punjab Spraying Trials Scheme.*

The report of the Agricultural Research Sub-Committee noting the non-mention of the actual yields in sprayed and unsprayed plots and emphasising the need for full details of the individual yields in the next report in order that their statistical significance may be considered was adopted.

SUBJECT 39.—*Progress Report on the Punjab Root Rot Scheme.*

The report of the Agricultural Research Sub-Committee suggesting that in view of the fact that the scheme has only one year more to run, items 8 to 12 of the programme of work may be omitted and that instead the results so far obtained be confirmed and attention concentrated on determining whether any soil treatment reduces *Rhizoctonia* attack and whether *Rhizoctonia*-resistant strains of cotton exist since 2 species of the *Rhizoctonia* are regarded as primarily responsible for the disease, was adopted.

SUBJECT 40.—*Progress Report on the Punjab Defibrating and Delinting Scheme.*

The report of the Agricultural Research Sub-Committee saying that the machines have only been recently received and the work done is of no special value was adopted.

SUBJECT 41.—*Progress Report on the Central Provinces Botanical Scheme.*

The report of the Agricultural Research Sub-Committee was adopted.

SUBJECT 42.—*Final Report on the United Provinces Entomological Research Scheme.*

In reply to *Mr. Ramamurty's* enquiry as to whether the report had been completed and when it might be expected, *Mr. Richards* said that the material for the report was ready and he hoped to be able to submit it by the next meeting. Material facts were contained in the reports submitted to the Committee from the start to the termination of the scheme and it now remained to write up the results for publication. To a further enquiry as to whether the materials referred to were those submitted by him before 1931 when the scheme was extended, Mr. Richards explained that the writing up consisted of assembling and selecting the vast amount of data collected. The final extension of Mr. Nangpal's term had been to assist in assembling and arranging the data. The *President* enquired if Mr. Richards was satisfied that Mr. Nangpal had used the extended period usefully in helping him to write up the report. *Mr. Richards* explained that the first year of Mr. Nangpal's extension was almost exclusively devoted to clearing up points in the bionomics of the boll-worm and the second was spent partly on this work and partly on assembling the data collected during the investigation. He certainly was of the opinion that Mr. Nangpal had profitably spent his time. He hoped to find time on the return of the Director of Agriculture from leave and get on with the work of writing up the report. *Mr. Ramamurty* asked if Mr. Richards could give an approximate date for the submission of the report. *Mr. Richards* questioned as to whether it was proper for members of the Committee to expect a Government servant who was supervising a Committee scheme, in addition to his own work, to give a fixed date. He nevertheless hoped to find time and get the work written up during the next cold weather. The *President* then raised the question of general principles whether the Committee was entitled to a final report or not. While the Committee ought not to depend upon the goodwill of a Government servant for a final report, it ought not to pretend to get out of Mr. Richards what he was not bound to give. Two years were a fairly long time to get the report ready but if the report was a matter of courtesy the matter had better be dropped. *Mr. Burt* said that hitherto the Committee stipulated that everyone accepting a grant should furnish annual progress reports but when the last report came in the Committee invariably considered the best method of publishing the entire scientific and technical results, just as the Committee had lately considered the desirability of publishing the Surat Physiological Scheme as a monograph. In the case of the United Provinces Pink Boll-worm Scheme the Committee had already received annual reports containing material facts. Mr. Nangpal during the first year of extension had completed a minor portion of the scientific work and his subsequent period was utilized for assembling scientific data for preparation of the report. The *President* remarked that in that case the Committee stood to gain nothing by having extended Mr. Nangpal's services, to which *Mr. Richards* replied that he would be happier if the Committee could advise the United Provinces Government to put him on special duty, like the officers engaged on Surat and Dharwar Schemes,

to write up the report. *Lala Shri Ram* was of the opinion that if the Committee had no right to ask for the report it had better not spend more money for the further extension of the scheme. *Mr. N. M. Deshmukh* contended that even if ordinarily the Committee had no right to a final report it had a right in this case as the scheme had been extended for the specific purpose. He wondered what the Publicity Officer was going to do in the United Provinces if the collected data was not available in the form of a final report. *Dr. Burns* said that in the case of the Surat Physiological Scheme and the Dharwar Wilt Scheme the Committee had willingly sanctioned time and money for writing up their reports by the officers in charge of the respective schemes. For a body with international reputation like the Indian Central Cotton Committee it was essential that its research work should be put together in a final form, properly documented and published so that for all time it might remain a work of reference in other parts of the world. In the case of the two Bombay Schemes referred to above, actual research workers had been entrusted with the work of writing up the results and given special extensions to write them up. The Committee, to his mind, had the right to call for the report, and he pleaded that more time might be allowed to enable Mr. Richards to write up the report. The *President* observed that the Secretary should in future, while communicating to the local Governments the Committee's sanction to schemes, stipulate not only for annual reports but for full reports. At present it was not clear whether the Committee was exacting final reports with legal rights or the local Governments were fulfilling their obligations. In this case the Committee had a right to ask for the report, and he requested Mr. Richards to submit the report before the next meeting. *Mr. Richards* conceded that the Committee had the right to expect the work to which it had contributed and he was himself very anxious that scientific results obtained by him should be circulated. It was agreed that Mr. Richards should submit his report before the next meeting. *Mr. Burt* suggested that in future the Committee should see that a final report was submitted within a few months after the completion of a scheme and that all the scientific data obtained during the whole term of the scheme for publication in a suitable manner was secured. This was agreed to.

SUBJECT 43.—*Progress Report on the scheme for survey of cottons in Rohilkhand and Bundelkhand, United Provinces.*

The report of the Agricultural Research Sub-Committee on the Progress Report showing the discovery of a particular type of new plant having the external characters of G. neglectum roseum with better fibre length throughout the area surveyed and suggesting examination for its purity was adopted.

SUBJECT 44.—*Annual Report of the Institute of Plant Industry, Indore.*

The report of the Agricultural Research Sub-Committee was adopted.

SUBJECT 45.—*Progress Report on Hyderabad Botanical Research Scheme.*

The report of the Agricultural Research Sub-Committee suggesting that item 2 in the programme of the scheme should be decided on in consultation with Rai Saheb Kalidas Sawhney on his return, since the work would be too much and would necessitate curtailment of programme in other aspects, was adopted.

SUBJECT 46.—*Progress Report on Hyderabad Pink and Spotted Boll-worm Scheme.*

The report of the Agricultural Research Sub-Committee on the progress report on this scheme which showed that Pink Boll-worm was a serious pest of cotton in Hyderabad State, and that critical information regarding this could be obtained only by a fully trained and experienced Entomologist in two years, who should carry out his work under black soil conditions, was adopted.

SUBJECT 47.—*Progress Report on Hyderabad Cotton Survey Scheme.*

The report of the Agricultural Research Sub-Committee was adopted.

SUBJECT 48.—*Progress Report on Bikaner Gang Canal Scheme.*

The report of the Agricultural Research Sub-Committee on the Progress Report showing that of all cottons so far tested Mollisoni is best suited to the agricultural conditions of Ganganagar was adopted.

SUBJECT 49.—*Progress Report on Baroda Root Rot Scheme.*

The report of the Agricultural Research Sub-Committee considering a species of *Rhizoctonia* as the main cause of the disease and noting the selection of plants less susceptible to disease was adopted.

SUBJECT 50.—*Progress Report on Burma Cotton Improvement Scheme.*

The report of the Agricultural Research Sub-Committee recommending that the scheme should be continued to its sanctioned period but no extension would be given to it was adopted.

SUBJECT 51.—*Seed Distribution and Extension Schemes—Progress Report on Hubli Scheme.*

The report of the Agricultural Research Sub-Committee was adopted.

SUBJECT 52.—*Seed Distribution and Extension Schemes—Progress Report on Gadag (Extension) and Gadag (Supplementary) Schemes.*

The report of the Agricultural Research Sub-Committee was adopted.

SUBJECT 53.—*Seed Distribution and Extension Schemes—Progress Report on Surat Scheme.*

The report of the Agricultural Research Sub-Committee was adopted.

SUBJECT 54.—*Seed Distribution and Extension Schemes—Progress Report on Khandesh (Banilla) Scheme.*

The suggestion of the Agricultural Research Sub-Committee that the spinning tests in Banilla should be supplied along with the progress report was adopted.

SUBJECT 55.—*Seed Distribution and Extension Schemes—Progress Report on Athani Scheme.*

The Report of the Agricultural Research Sub-Committee was adopted.

SUBJECT 56.—*Seed Distribution and Extension Schemes—Progress Report on Sind Scheme.*

The Report of the Agricultural Research Sub-Committee suggesting the desirability of making attempts at as early a date as possible, to fix zones for the different cottons to be recommended, and recommending the continuation of the propaganda scheme, was adopted.

SUBJECT 57.—*Seed Distribution and Extension Schemes—Madras (Tiruppur) and Co. 2 Schemes.*

The Report of the Agricultural Research Sub-Committee recommending that these progress reports should be as concise as possible consistent with clearness and admitting the satisfactory working of the scheme was adopted.

The attention of the Committee being drawn by *Mr. Ramamurty* to the fact that the Tiruppur Co-operative Society worked so successfully that it did not ask for the subsidy granted by the Committee, the *President* congratulated its leader, Mr. Ramaswami Gownder, on his ability to conduct the affairs of the Society, so successfully.

SUBJECT 58.—*Seed Distribution and Extension Schemes—Progress Report on H1 Scheme.*

The Report of the Agricultural Research Sub-Committee recommending its closure and starting of a fresh scheme only if it overcomes all the difficulties encountered in the past was adopted.

Mr. Ramamurty informed the Committee that in anticipation of its sanction he had already closed the H1 scheme and hoped to place a fresh scheme next year.

SUBJECT 59.—*Seed Distribution and Extension Schemes—Progress Report on the Central Provinces (Verum) Scheme.*

The Report of the Agricultural Research Sub-Committee approving of the very satisfactory progress made by this scheme and recommending that it should be combined with the new extension scheme (Subject 87), as suggested by the Director of Agriculture, was adopted.

SUBJECT 60.—*Seed Distribution and Extension Schemes—Progress Report on Hyderabad Scheme.*

The Report of the Agricultural Research Sub-Committee approving of the proposal of the Hyderabad Agricultural Department to organize their own local seed production to obviate the necessity of importing large amounts of seed was adopted.

SUBJECT 61.—*Seed Distribution and Extension Schemes—Statement of costs for cotton ginned at the Lyallpur Ginnery.*

The Report of the Agricultural Research Sub-Committee, noting the total cost of ginning one maund of cotton as Re. 0-2-9 for saw gin and Re. 0-7-10 for roller gin, was adopted.

SUBJECT 62.—*Seed Distribution and Extension Schemes—Progress Report on Baroda Scheme.*

The Report of the Agricultural Research Sub-Committee suggesting that a larger area than that proposed in the scheme should be controlled since Baroda has nearly two lakhs of acres under cotton was adopted.

SUBJECT 63.—*Proposed New Agricultural Research Schemes—Scheme for investigation into Root Rot of Cotton in Gujerat.*

The Report of the Agricultural Research Sub-Committee suggesting the undesirability to start another scheme when schemes on the same subject are already in progress in the Punjab and Baroda State was adopted.

SUBJECT 64.—*Proposed New Agricultural Research Schemes—Scheme for study of "Lang" Caterpillar pest in Gujerat.*

The Report of the Agricultural Research Sub-Committee saying that this is not a cotton problem and therefore not suitable for a grant from the Indian Central Cotton Committee was adopted.

SUBJECT 65.—*Proposed New Agricultural Research Schemes—Scheme for survey of Goghari cotton in Gujerat.*

The Report of the Agricultural Research Sub-Committee recommending its sanction for five years at an estimated cost of Rs. 5,000, since the scheme is a necessary corollary of the Committee's policy to grow only 1027 A.L.F. south of Nerbudda, was adopted.

SUBJECT 66.—*Proposed New Agricultural Research Schemes—Scheme for survey of Goghari cotton in Baroda State.*

The recommendation of the Agricultural Research Sub-Committee to sanction this scheme for five years at an estimated cost of Rs. 5,000 was adopted.

SUBJECT 67.—*Proposed New Agricultural Research Schemes—Scheme for Cotton Jassid Investigation in the Punjab.*

The Director of Agriculture, Punjab, agreeing with the Agricultural Research Sub-Committee that for the present this scheme can be carried on by the existing entomological staff at Lyallpur, the scheme was withdrawn.

SUBJECT 68.—*Proposed New Agricultural Research Schemes—Scheme for investigation into "Red Leaf" disease of Doddahathi (American) cotton in Mysore.*

Pointing out the possibility of considerable increase in the area under Dharwar-American cotton in the Mysore State in the event of "Red Leaf" being brought under control, *Mr. Yegna Narayana Iyer* pleaded for a grant of Rs. 10,000 per annum for 5 years, to enable the Mysore State to carry on the work. The State had been co-operating with the Committee from the very inception of the Committee and commanded all facilities of equipment and staff, for central research of the disease. The *President* in reply drew attention to the Agricultural Research Sub-Committee's Report which had recommended postponement of the scheme and assured the previous speaker that there was no question of a slur on the Mysore Agricultural Department. *Mr. Burt* pointed out that as stated in paragraph 2 of the note on the subject, it was only on technical grounds that the scheme was left over till the next meeting, with a view to enable scattered information being collected in the meanwhile. The Report of the Agricultural Research Sub-Committee was adopted.

SUBJECT 69.—*Proposed New Seed Distribution and Extension Schemes—Wagad Seed Distribution and Extension Scheme.*

The Report of the Agricultural Research Sub-Committee suggesting that Mr. Patel be asked to put up a modified scheme to cover the initial stages of testing and distribution and recommending to the Committee for giving help in this scheme was adopted.

SUBJECT 70.—*Report* of the Agricultural Research Sub-Committee.*

The *President* proposed the following resolution :—

RESOLUTION—"That the report of the Agricultural Research Sub-Committee be adopted."

This was seconded by *Sardar Rao Bahadur B. R. Naik* and carried.

* Appendix VI (page 84).

SUBJECT 71.—*Report* of the Standing Finance Sub-Committee.*

(*a*) *Balance Sheet as at March 31st*, 1934.
(*b*) *Final Accounts*, 1933–34.
(*c*) *Revised Estimates*, 1934–35.
(*d*) *Budget for* 1935–36 (*Government servants*).

Rao Bahadur M. G. Deshpande drew attention to the large number of new schemes sanctioned at this meeting and suggested that the Standing Finance Sub-Committee should provide money for these schemes only in order of priority to be decided upon by that Sub-Committee, otherwise the reserves of the Committee would soon be depleted. The *President* suggested that the drawing up of the priority list be left to the Standing Finance Sub-Committee, which was agreed to. *Seth Isserdas Varindmal* suggested the formation of small Provincial Sub-Committees to supervise the provincial schemes, to which view *Mr. Burt* replied that this point had already been considered.

The Committee had made a recommendation to all local Governments that members of the Indian Central Cotton Committee should also be made members of the Provincial Cotton Committees and this recommendation was given effect to in all provinces. The Committee's object would be well served if Provincial Cotton Committees would take an active interest in research as well as trade matters. The Sind Cotton Committee was a very live one and he felt sure Mr. Jenkins will give it all liberty to discuss the Sind research schemes. *Mian Nurullah* regretted the lack of control over the Committee's budget instancing the way in which money had been allowed to accumulate at Indore for several years for no obvious purpose. He suggested that the budgets and the balance sheets should be presented in an intelligible and more straightforward manner and saw no necessity for providing for expenditure which was not being incurred, as for example, the Deputy Secretary's post which should be filled. *Sardar Sampuran Singh* said that the Committee had better leave research workers to do their work peacefully without the supervision of a Sub-Committee of laymen. *Mr. Y. G. Deshpande* suggested that the Directors of Agriculture might take in their confidence members of their Provincial Cotton Committees when a scheme was to be sanctioned, as it was essential that local members should be satisfied on the benefits to the province of a particular scheme before it was submitted to the Indian Central Cotton Committee. He suggested that the Provincial Cotton Committee of the Central Provinces might meet more frequently to discuss every new scheme and offer advice. *Mr. Chunilal B. Mehta* was of the opinion that local committees would be beneficial in that their members would bring to the notice of Directors of Agriculture what the general public, trade and the agriculturist thought about a particular proposal. He was in favour of more time being allowed to the consideration of this subject so that it might be brought before the next meeting. *Mr. Mahta*, as Secretary of the Central Provinces Provincial Cotton Committee said that the numbers of

* Appendix VII (page 96).

meetings depended entirely on the number of suitable subjects to be discussed. If no suggestion was received and the Department had no important items on the agenda, no meeting was held. Referring to a remark made by a member that they might inspect and report on the work done in the provinces, he would like to enquire how often did Mr. Deshpande take the trouble of paying a visit to the Research Laboratory and the Farm when he came to Nagpur. *Dr. Burns* thought there were already sufficient Committees. The Indian Central Cotton Committee amply fulfilled the object Seth Isserdas Varindmal had in view. The disagreement which the Committee had over a phrase in the findings of the Special Meeting of the Agricultural Research Sub-Committee under Subject 19 demonstrated how the different interests even on the Indian Central Cotton Committee could differ. The Committee provided a common platform for the co-ordination of different interests and any further division would lead to narrow provincialism. The *President* suggested that the first proposal of the appointment of Provincial Committees to supervise schemes might be referred to the Agricultural Research Sub-Committee for report and the second one pertaining to the presenting of the budget be referred to the Standing Finance Sub-Committee for report. *Seth Isserdas Varindmal* said that the Sind Cotton Committee had full confidence in Mr. Jenkins. He only wished to point out that the Committee which controlled the purse could have its voice heard more effectively than the Sind Cotton Committee. *Sardar Rao Bahadur B. R. Naik* thought that the representatives of the trade and growers should know what was going on in their respective districts and although he knew that no local Government would allow another body to supervise the work of their agricultural department, yet members should have the privilege of acquainting themselves with the work done in their respective areas, just as members of Legislative Councils were entitled to local information, so that they may pass it on to the agriculturist of the locality. *Mr. Y. G. Deshpande* took exception to the remarks of Mr. Mahta and said that members could only be expected to give their views when called upon to do so and not suggest subjects, to which *Mr. Mahta* replied that every opportunity was given at the Provincial Cotton Committee's meetings to discuss the schemes in progress and every scheme was put before the Provincial Cotton Committee which met at least once a year.

The following resolution was proposed by the *President*, seconded by *Mr. Chunilal B. Mehta* and carried unanimously :—

RESOLUTION—"That the Report of the Standing Finance Sub-Committee be adopted."

"That the Revised Estimates for 1934-35, as now amended, be approved."

"That the Budget for the pay of Government Officers for 1935-36 be approved."

SUBJECT 72.—*Proposed inclusion of Pulgaon under C.P. No. 1 tenderable places.*

The *President's* suggestion was agreed to. *Mr. N. M. Deshmukh* stated that the agriculturists, cotton dealers and the Municipality of

Pulgaon were losing from Rs. 50,000 to Rs. 80,000 annually as Pulgaon, unlike Wardha, had not been recognised as a C.P. No. 1 tenderable station, instead of a C.P. No. 2 station as it now was.

As they were on the same side of the river Wardha, and the quality of the soil and the cotton grown there were about the same he saw no reason for differentiation but on appealing to the East India Cotton Association he was informed that Pulgaon cotton was inferior to that of Wardha. To disprove this belief he asked for samples from both places to be tested at the Technological Laboratory, but the East India Cotton Association relied on the valuation of graders and did not want tests at the Laboratory, even though he pointed out from actual experience that the reports from the latter were more reliable than reports from the former. He therefore moved the following resolution :—

"That the East India Cotton Association be requested to place the Pulgaon cotton as C.P. No. 1."

Rao Bahadur G. R. Kothare seconding the resolution said that the position was anomalous. Pulgaon cotton was classed as C.P. No. 2 while sold there, but when carted to Wardha it was classed as C.P. No. 1. This resulted in the migration of a fair quantity of this cotton every year to Wardha. Mr. Deshmukh's proposal to decide the classification of Pulgaon on the results of Laboratory tests was a reasonable one and should be accepted by the East India Cotton Association. *Mr. Chunilal B. Mehta* said that the question was of marketing and not of growing and had received the careful consideration of the East India Cotton Association. The trade thought the Wardha cotton superior to Pulgaon and paid higher prices for it. Laboratory tests were not always uniform and, on the contrary, the graders were sometimes able to judge cotton much better than tests at the Laboratory. The passing of a resolution amounts to pressure being brought on the East India Cotton Association ; it was enough if a copy of the discussion was sent to the Association for information. *Mr. M. D. Williams* agreed that the matter be left to the East India Cotton Association to deal with. *Mr. Mahta* confirming Mr. Deshmukh's statement regarding the quality of Pulgaon cotton said that though Pulgaon itself grew as good a cotton as any part of the Central Provinces, it was easily accessible to inferior Berar cotton and for this reason was classed as C.P. No. 2. *Rao Bahadur M. G. Deshpande* testified to the fact that the cotton grown at Pulgaon was as good as C.P. No. 1, but the cotton carted from the other side of the river was however inferior. *Mr. Ritchie* explained that it was because Berar cotton came to Pulgaon that Pulgaon was classed as C.P. No. 2 even though the cotton grown on Pulgaon area was in reality C.P. No. 1. *Rao Bahadur Kothare* asked if as stated, Arvi being close to C.P. No. 1 area there was anything to prevent Berar cotton being taken to Wardha to fetch a better price, and when such cotton from Arvi was taken to Wardha, the same passed as C.P. No. 1. *Mr. N. M. Deshmukh* fully agreed with the suggestion of Mr. Chunilal B. Mehta and begged leave to withdraw his resolution. It was decided to send a copy of the discussion to the East India Cotton Association.

SUBJECT 73.—*Proposed New Agricultural Research Schemes—Scheme for defibration of cotton seed in the Bombay Presidency.*

The Report of the Agricultural Research Sub-Committee recommending the provision and installation at Palej of the defibrating machine from the funds of the Indian Central Cotton Committee at an initial outlay of Rs. 3,700 and recurring annual expenditure of Rs. 1,750 for a period of three years and accepting the kind offer of the *Vice-President* for the free supply of seed and power as required was adopted.

SUBJECT 74.—*Progress Report on Plant Puller Propaganda Scheme in Surat and Broach Districts.*

The Report of the Agricultural Research Sub-Committee was adopted.

SUBJECT 75.—*Supply of N. R. and Cambodia cotton seeds in the Southern Division of the Bombay Presidency.*

The Secretary's note was recorded.

SUBJECT 76.—*Draft Rules under the Central Provinces Cotton Market Act.*

Rao Bahadur Kothare, while thanking the Government for amending the Cotton Market Rules, said that the attention of the local Government should be drawn to the need for sending such matters sufficiently early to enable the Committee to send its opinion before they were enacted. This was seconded by *Mr. Burt* and accordingly it was decided that the local Governments be requested to send such rules to the Committee early enough to permit of their discussion at the full meeting and an opinion offered.

SUBJECT 77.—*Draft Rules under the Madras Commercial Crops Markets Act.*

The Secretary's note saying that the Madras Government propose to adopt 28 lbs. maund weight and the Bombay candy of 784 lbs. as standard units for all cotton transactions in the Presidency was recorded.

SUBJECT 78.—*Universal Standards for Indian Cotton—Progress Report.**

Seth Isserdas Varindmal complained that since last he served on the Standards Sub-Committee, the Local Sub-Committee had changed its constitution in such a way so as to exclude Karachi members when Bombay cottons were to be considered. He saw no reason why Bombay alone should have a hand in the preparation of all standards and not Karachi. *Mr. Chunilal B. Mehta* explained that Bombay unlike Karachi was interested in all cottons and had therefore to be on the Standards Sub-Committee when Sind and Punjab cottons as well as other cottons were being dealt with. The Indian Central Cotton Committee had met the requirements of Karachi by providing representation for them when standards of cottons in which they traded were being prepared. In reply

* Appendix VIII (page 128).

to Seth Isserdas Varindmal's remark that Karachi might be left alone to pass its own standards, *Mr. Chunilal B. Mehta* explained that the Standards Sub-Committee was set up by the Indian Central Cotton Committee and the Imperial Council of Agricultural Research and not by the East India Cotton Association. *Mr. Burt* explained that the reason the Committee took an interest in this matter was the divergence in the same standard prepared by Karachi and Bombay which the Committee was to reconcile. Two representatives each of the Karachi and East India Cotton Associations, with an independent member nominated by the Imperial Council of Agricultural Research constituted the Standards Sub-Committee. Two series of standards were prepared in India, one at Bombay and the other at Karachi and it was intended to secure uniformity. As for a representation of the growers' interest on the Standards Sub-Committee, the matter might be referred to the Sub-Committee, although he himself saw no need for it, for consideration as to whether the membership of the Sub-Committee might not be limited to recognized associations. *Mr. Travers* urged that as all Karachi cottons were dealt with under the rules of the East India Cotton Association it would be difficult to get it to accept standards which they had no hand in preparing. Surely the East India Cotton Association would not grudge Karachi having permanent representation when the Karachi market became larger. The *Vice-President,* referring to Seth Isserdas Varindmal's contention why Karachi should be made to invite Bombay for the preparation of Karachi standards, when the latter did not invite the former for the preparation of Bombay standards pointed out that Karachi had of its own accord sought Bombay's help in the preparation of its own standards for Sind, Punjab and Bengal cottons. Further, Bombay had been preparing standards long before Karachi had any. The idea was not to set up competition between the two centres but to utilise local expert knowledge in the preparation of standards. In the case of Sind cottons, representatives of the Karachi and Bombay associations would meet. But in the case of, say, Berar or Central Provinces cotton the Local Sub-Committee decided only Bombay and one or two growers and one permanent local middleman nominated on the recommendation of the Director of Agriculture would be called upon to have a hand in the matter. While welcoming any definite constructive proposals, he advised Seth Isserdas Varindmal to fundamentally revise his ideas of universal standards. *Mr. Travers* thought a middleman and a grower would serve the purpose better than two growers. *Mr. Y.G. Deshpande* supported the Local Sub-Committee's recommendations; common standards for the whole of India were really beneficial and on that score must be cheerfully accepted by all.

The following resolution proposed by the *President* and seconded by *Mr. Chunilal B. Mehta* was carried:—

RESOLUTION—"That the Indian Central Cotton Committee confirms the action taken by the Local Sub-Committee in connection with the adoption of Universal Standards for Indian cottons and that the procedure indicated in paragraph 6 of the Secretary's note be approved."

SUBJECT 79.—*Extension of cotton cultivation in Bengal.*

Mr. Guha regretted that no attempt had been made to grow staple cotton in Bengal. Considering the fact that Bengal once produced the best cotton in India from which the famous Dacca muslins were made he moved the following resolution, seconded by *Mr. Nizam-ud Din Hyder :*

"That the Committee should grant to Bengal a small grant of Rs. 3,000 per annum for five years to find out whether staple cottons can be grown there and that an officer be appointed to make a survey in this respect."

Dr. Burns proposed that the resolution be referred to the Agricultural Research Sub-Committee for consideration. *Mr. Hutchinson* drew attention to the annual report of the Department of Agriculture, Bengal, for 1925–26 cited in the secretarial note, and proposed that a piece of the Dacca muslin offered by the Nawab Bahadur of Dacca be obtained and tested at the Technological Laboratory and results placed before the Agricultural Research Sub-Committee. He was anxious to know the fibre properties of the cotton used in Dacca muslin. The *President* suggested referring the matter to the Agricultural Research Sub-Committee for report and Mr. Guha be invited to attend its next meeting when the question was discussed. This was agreed to.

SUBJECT 80.—*Examination of the possibility of using short staple Indian cotton for the manufacture of artificial silk.*

Lala Shri Ram said that the Japanese boycott of Indian cotton had shown the extreme importance of finding out other uses for the Indian short-staple cotton.

Mr. Burt said that the proposal was that the most modern type of artificial silk and its suitability to India should be studied. This type of rayon resembled cotton in many respects ; other countries had begun to do it, and if India did not follow their example and make staple fibre, she would soon be importing it.

The recommendation of the Technological Research Sub-Committee that a sum of Rs. 30,000 be sanctioned for examining the practicability of manufacturing artificial staple fibre from Indian short staple cotton was adopted.

SUBJECT 81.—*Scheme for the propagation of C. 402 cotton in the Hardoi and neighbouring districts of Lucknow and Sitapur, United Provinces.*

The Report of the Agricultural Research Sub-Committee recommending that it should be considered by the Standing Finance Sub-Committee in relation to the financial position was adopted.

SUBJECT 82.—*Proposal for provision of fumigation facilities at Calcutta.*

Mr. Guha urged that the Government of India be approached to provide facilities for fumigation of American cotton at Calcutta on economic grounds. *Mr. Burt* thought that the expenditure involved

would be excessive for the small consumption of cotton in Calcutta, and the Government of India would naturally desire to see that the scheme was self-supporting as at Bombay. The *President* confirmed the views of the previous speaker and thought their case too weak to make any impression on the Government at present. *Mr. Y. G. Deshpande* said that Indian mills should make greater use of Indian long staple cotton, in view of the efforts that are being made to grow it in Sind and elsewhere.

SUBJECT 83.—*Grant of honorarium for preparation of Indices of Minutes of the Committee and its Sub-Committees.*

The *President* proposed the following resolution :—

RESOLUTION—"That the Secretary be authorised to grant honoraria to the staff of his office for the preparation of indices of Minutes of meetings of the Indian Central Cotton Committee and its various Sub-Committees up to a maximum of Rs. 50 for each year's Minutes."

This was seconded by *Rao Bahadur Kothare* and carried.

SUBJECT 84.—*Proposed introduction* of a common unit for the purchase of seed cotton throughout India.*

The *President* proposed the following resolution :—

RESOLUTION—"That the Indian Central Cotton Committee desires to express its thanks to the Governments of Bombay, Madras, Punjab, United Provinces and Central Provinces for the steps taken by them to give effect to the Committee's recommendations for the introduction of common units of weight for cotton transactions. The Committee would further urge on the Bombay Government the desirability of standardising also the Bombay candy of 784 lbs. as a unit of weight in the Presidency, particularly as this unit is being adopted in practically all the other major cotton-growing provinces in India."

This was seconded by *Mr. Chunilal B. Mehta* and carried.

SUBJECT 85.—*Broadcasting† of Commercial News on cotton.*

Mr. N. M. Deshmukh moving the following resolution deplored the discontinuance of commercial news which the Bombay Broadcasting Station had hitherto transmitted and which was of great value to the agriculturist in the up-country. He appealed to the Indian Central Cotton Committee to support the East India Cotton Association's representation on this matter :—

RESOLUTION—"That the Indian Central Cotton Committee requests the Government of India to resume the broadcasting of all commercial news connected with cotton in the mornings particularly through the Bombay Radio Station."

* Appendix IX (page 128). † Appendix X (page 129).

Rao Bahadur Kothare wanted to know how in the absence of broadcasting could Rule 86 of the Central Provinces Cotton Market Act be expected to function, in the absence of previous day's closing rates? *Mian Nurullah* deprecated the action of the Government of India especially at the time when the Punjab Government was launching a campaign of broadcasting the latest market news to villages. The *Vice-President* stressed the importance of broadcasting in India for the dissemination of important items of news, such as cotton news. It showed in a bad light the motives of the Government of India which were apparently merely for a new source of revenue. Briefly stated the action of the Government amounted to this. They had discontinued the broadcasting owing to the loss of revenue to the Telegraph Department from various interests who used to get the news by telegrams from Bombay. The same department which was amassing crores of rupees from postal, telephone and telegram charges could hardly be justified in curtailing broadcasting because of a slight loss in telegraph revenues. Apparently the Government had not considered the amount of loss on experiments incurred by Bombay investors before they took it over and simply looked upon it as a money-making machine. He insisted that middle class up-country merchants and *zamindars* owned sets mainly for the purpose of getting cotton prices. He was strongly of the opinion that commercial quotations ranked first before any other news on the radio programme. He knew of cases when important telegrams were delayed by subordinate servants of the Telegraph Department for gratuities on *Diwali* days. He urged the President to appraise the authorities at Simla of the urgent need for the restoration of the broadcasting system. *Mr. M. D. Williams* supported the proposal from his experience of the usefulness of broadcasting commercial news in the Punjab and advocated the broadcasting of Karachi prices along with Bombay prices, as this would be of great service to cotton interests of that province. *Messrs. Plummer and Isserdas Varindmal* supported the resolution. *Sardar Sampuran Singh* was also of the same opinion and stigmatised the Government's action for revenue purposes as a petty one. *Mr. Chunilal B. Mehta* pointed out that telegrams were undependable as they were often received too late to be of use. *Messrs. Salimath and B. S. Patel* likewise testified to the eagerness of the farmers to get the latest radio news before they sold their cotton. *Mr. Y. G. Deshpande* stressed the importance of radio commercial news to villages cut off from telegraph communication and to the general scheme of village uplift. *Dr. Burns* stated that in his annual report this year he had deliberately drawn the attention of the Government of Bombay to the usefulness of radio. *Mr. Ritchie* was also in favour of broadcasting and would like to see receiving sets in all the Central Provinces markets. *Sardar Rao Bahadur Bhimbhai R. Naik* thought that broadcasting would save the Indian peasantry from exploitation by middlemen and he failed to understand such action from a Government who pretended to be their well-wishers. The action of the Government, he thought, jeopardized the interest of the cultivator who was ensured fair prices for his cotton by the daily publication of central market prices. *Mr. Nizam-ud Din Hyder*

likewise urged the restoration of the radio system, especially in view of the Hyderabad Government having in contemplation a broadcasting scheme for rural uplift work. *Mr. Sane* from his own experience of villages in the Baroda State was convinced that broadcasting sets were mainly used for commercial news, without which these sets were considered to be of little use.

SUBJECT 86.—*Proposed new Agricultural Research Schemes—Plant Puller Propaganda Scheme in Baroda.*

The Report of the Agricultural Research Sub-Committee, approving in general the scheme but suggesting that the pay of the Graduate Assistants should not exceed Rs. 70 per mensem and that after the first year of intensive propaganda a large number of *Kamgars* be employed instead of the more expensive fieldmen, and recommending the adoption of the scheme at an estimated total cost of Rs. 9,380 for two years, was adopted.

SUBJECT 87.—*Proposed new Seed Distribution and Extension Schemes—Scheme for the marketing of Verum cotton.*

The Report of the Agricultural Research Sub-Committee recommending an additional grant of Rs. 1,35,022 spread over a period of 5 years and 2 months in addition to the grant already made at the last meeting of the Committee was adopted.

The *President* thanked the members for the courtesy and patience and the extreme goodwill shown to him which had enabled the Committee to get through the heaviest agenda they ever had in record time.

Sardar Rao Bahadur Bhimbhai R. Naik proposed a very hearty vote of thanks to the President.

This was carried with acclamation.

R. D. MIHRA,

Publicity and Propaganda Officer.

RESOLUTIONS.

Appointment of cotton growers' representatives on the Committee to the Board of Directors of the East India Cotton Association.

1 "That the existing three members be re-elected".

Representation of cotton interests in Karachi on the Indian Central Cotton Committee.

2 "That the Indian Central Cotton Committee accepts Mr. Jenkins' proposal as contained in the Secretary's Supplementary note".

Resignation of Mr. D. F. Kapadia, Assistant Technologist, Technological Laboratory.

3 "That a Sub-Committee consisting of the President, Vice-President, Khan Bahadur Sardar Habibullah and Rao Bahadur M. G. Deshpande be appointed to examine the allegations made by Mr. D. F. Kapadia and to report to the next meeting of the full Committee".

Licensing of gins and presses.

4 "That the Indian Central Cotton Committee desires to remind the Government of India of its Resolution passed at its meeting on the 29th August 1933 and wishes to draw the attention of Government to the dangerous increase in the evil of watering of cotton which calls for immediate action in the interest of Indian cotton".

Cultivation of improved varieties of cotton in the Barrage areas of Sind.

5 "That the Indian Central Cotton Committee endorses the resolution of the Special Sub-Committee regarding the establishment of a compact block of long staple cotton in Sind and approves generally of the proposals of the Chief Agricultural Officer in Sind".

Campaign for extension, seed distribution and marketing of pure Sind-American cotton.

6 "That the various suggestions of the Sind Cotton Committee be referred back to the Chief Agricultural Officer in Sind for reconsideration by the Sind Cotton Committee with the object of ascertaining to what extent any of the suggestions made could be given effect to".

Half-yearly Report of the Publicity and Propaganda Officer.

7 " That the Report of the Publicity and Propaganda Officer be adopted ".

Report on the Fumigation of American Cotton.

8 " The Indian Central Cotton Committee approves of the action taken by the Standing Finance Sub-Committee in regard to the question of the reduction of the Bombay Port Trust share of fumigation charges and the revision of the pay and allowances of the fumigation staff."

" The Indian Central Cotton Committee requests the Government of India to sanction a rebate of eight annas per square bale and five annas per round bale on the fumigation fee paid on American cotton fumigated at square bale and round bale rates during the fiscal year 1933–34."

" The Indian Central Cotton approves of the action taken by the Local Sub-Committee in recommending to the Government of India the abolition of the special fee of Rs. 10 for sample bales ".

Report of the Cotton Forecast Improvement Sub-Committee.

9 " That the Report of the Cotton Forecast Improvement Sub-Committee be adopted ".

The Institute of Plant Industry, Indore—Future Policy.

10 " This Committee resolves that the Governing Body of the Institute of Plant Industry, Indore, be informed—

(1) that the representation of the Indian Central Cotton Committee on the Governing Body each year should be in proportion to the contributions received in the preceding year from the Indian Central Cotton Committee and the States taking an interest in the Institute,

(2) that the accounts of the Institute should be audited by the Auditor General as long as contributions from the Indian Central Cotton Committee continue,

(3) that the Indian Central Cotton Committee will contribute to the Institute for a period of three years from 1935–36 a minimum sum of Rs. 85,000 per year for purposes of research work in cotton—the programme for such work for each year to be approved by the Indian Central Cotton Committee. The Committee will also be prepared to consider applications for supplementary grants for cotton research on the approved programmes, if necessary ".

Meeting of the Indian Central Cotton Committee at Indore.

11 " That the Resolution of the Committee passed at its meeting in July 1928 requiring a cold weather meeting to be held at Indore once in three years be rescinded. Meetings will be held at Indore as and when the Committee considers it desirable to do so ".

Progress Report of the Director, Technological Laboratory.

12 " That the Progress Report of the Director, Technological Laboratory, be approved ".

Report of the Technological Research Sub-Committee.

13 " That the Report of the Technological Research Sub-Committee be adopted ".

Report of the Standing Finance Sub-Committee.

14 " That the Report of the Standing Finance Sub-Committee be adopted."

" That the Revised Estimates for 1934–35, as now amended, be approved."

" That the Budget for the pay of Government officers for 1935–36 be approved ".

Universal Standards for Indian cotton.

15 " That the Indian Central Cotton Committee confirms the action taken by the Local Sub-Committee in connection with the adoption of Universal Standards for Indian cottons and that the procedure indicated in paragraph 6 of the Secretary's note be approved ".

Grant of honorarium for preparation of indices of Minutes of the Committee and its Sub-Committees.

16 " That the Secretary be authorised to grant honoraria to the staff of his office for the preparation of indices of Minutes of meetings of the Indian Central Cotton Committee and its various Sub-Committees up to a maximum of Rs. 50 for each year's Minutes ".

Proposed introduction of a common unit for the purchase of seed cotton throughout India.

17 " That the Indian Central Cotton Committee desires to express its thanks to the Governments of Bombay, Madras, Punjab, United Provinces and Central Provinces for the steps taken by them to give effect to the Committee's recommendations for the introduction of common units of weight for cotton transactions. The Committee would further urge on the Bombay Government the desirability of standardising also the Bombay candy of 784 lbs. as a unit of weight in the Presidency, particularly as this unit is being adopted in practically all the other major cotton growing provinces in India ".

Broadcasting of Commercial News on cotton.

18 " That the Indian Central Cotton Committee requests the Government of India to resume the broadcasting of all commercial news connected with cotton in the mornings particularly through the Bombay Radio Station ".

Report of the Agricultural Research Sub-Committee.

19 " That the Report of the Agricultural Research Sub-Committee be adopted ".

APPENDIX I.

SUBJECT 9.—*Licensing of Gins and Presses.*

Secretary's Note.

This subject was last considered by the Committee at its meeting held in August 1933 when the following resolution was passed :—

RESOLUTION 1.—"That the Indian Central Cotton Committee reaffirms its resolution of 1924 recommending to the Government of India that the Cotton Ginning and Prossing Factories Act should contain a clause providing for the licensing of gins and presses and that this clause should be made operative in each province by resolution of the Provincial Legislative Councils."

The resolution of 1924 referred to was as follows :—

RESOLUTION 2.—"That the Central Cotton Committee, after having given full consideration to the proceedings of a meeting of the Cotton Growers, Ginners and Traders with members of the Provincial Cotton Committee held at Lahore on the 19th March 1924, and to the proceedings of the Provincial Cotton Committee held at Simla on 23rd June 1924, is convinced that the licensing of gins and presses will provide the only remedy for mixing in the Punjab, that is likely to have immediate and practical effect.

The Committee also wishes to impress upon the Government of India the desirability of putting the Gins and Presses Bill before the Legislature with as little delay as possible."

A copy of the discussion* on the subject at the August 1933 meeting of the Committee is attached.

In compliance with the resolution passed, the Government of India were addressed in the matter but their final orders are still awaited. In the meanwhile the following further developments have taken :—

(*a*) A representation (Enclosure I) was received in March last from about 40 leading cotton merchants and firms in Bombay drawing attention to the malpractice of watering cotton and suggesting the amendment of the Cotton Ginning and Pressing Factories Act for the introduction of a system of licensing.

(*b*) In March last the Central Provinces Board of Agriculture passed the following resolution :—

"The Board unanimously recommend that in the interests of the cotton-growers of these Provinces all Cotton Ginning and Pressing Factories should be licensed and requests the Central Provinces Government to ask the Government of India to amend the Cotton Ginning and Pressing Factories Act (No. XII of 1925), with this object in view."

It was stated at the meeting that if the grower of long staple cotton was to reap the full benefit of an enhanced premium, steps should be taken to prevent adulteration of his produce and to check any malpractice which would tend to bring into disrepute the cotton of any tract.

(*c*) The Bombay Millowners' Association in June last and the Bombay Chamber of Commerce in July last addressed the Government of India suggesting the licensing of ginning and pressing factories by an amendment of the Cotton Ginning and Pressing Factories Act, with the object of preventing watering and other malpractices in the cotton trade. Copies of their letters to the Government of India are attached. (Enclosure II and Enclosure III). These letters and the representation referred to at (*a*) above were considered by the Local Sub-Committee at its meeting on the 21st July last and it was decided that the Vice-President of the Committee should prepare a resolution in consultation with the Ahmedabad and Bombay Millowners' Associations, the East India Cotton Association, the Indian Merchants' Chamber and the Bombay Chamber of Commerce and place it before the full Committee at its next meeting. In accordance with this decision the Vice-President of the Committee met in conference on the 11th August 1934 the President of the East India Cotton Association, the Vice-Presidents of the Indian Merchants Chamber and the Bombay Chamber of Commerce and the Deputy Chairman and Secretary of the Bombay Millowners' Association, and

*Not printed—*Vide* Minutes—27th meeting—I.C.C.C.—page 12.

the following draft of a resolution embodying the decision arrived at was prepared for adoption by the Indian Central Cotton Committee at its forthcoming meeting :—

"The Indian Central Cotton Committee desires to remind the Government of India of its Resolution No. 1 passed at its meeting on the 29th August 1933 and wishes to draw the attention of Government to the dangerous increase in the evil of watering of cotton which calls for immediate action in the interest of Indian cotton."

The Ahmedabad Millowners' Association were not able to send a representative but they signified by wire their agreement with the object of the conference.

(*d*) Messrs. Volkart and Ralli Brothers reported to the Committee the prevalence of the malpractices of the watering of cotton, the mixing of seed with lint, the cheating of cultivators by the payment of lower prices for their *kapas* after carts had been unloaded in factory compounds and by the use of incorrect weights, and these reports were duly forwarded to the Government of India with the object of ascertaining from them what they proposed to do to prevent these and similar abuses.

Enclosure I.

THE CHAIRMAN, Bombay.

Indian Central Cotton Committee,

Bombay.

Dear Sir,

We beg to draw your attention to the following for serious consideration and necessary action.

The malpractice of watering raw cotton at the time of pressing is increasing day by day. It has been doing immeasurable harm to the cotton trade. Indian cotton has ceased to be an investment and watering has become one of the dangerous factors of depreciating its price. Little profit expected to be gained in weight vanishes if the cotton is not soon disposed of after its arrival in the selling market and in addition its colour and class is spoiled which affects its selling price. The fibre of such cotton begins to deteriorate and its quality injured the longer it remains unconsumed. Due to this deterioration its reputation is spoilt in world market.

If you look to the working of the season 1927-28 you will realise that the trade suffered to the extent of more than a crore of rupees owing to this malpractice of watering when ready Oomra cotton was sold at Rs. 45 per candy below Contract rate.

Under the circumstances, it is the considered opinion of the undersigned that it would be a service to the trade if this evil practice of watering raw cotton is rooted out ; and with a view to attain this object, we submit, you should approach the Indian Government to have the Cotton Ginning and Pressing Factories Act amended to the effect that any press owner who waters or allows or assists in watering raw cotton before pressing will be liable to fine or have his license suspended temporarily or permanently.

We beg to remain,
Yours faithfully,

KILACHAND DEVCHAND & CO., LTD.,
BHAIDAS CURSONDAS & CO.,
VARJIVANDAS MOTILAL,
P. CHRYSTAL & CO.,
BREUL & CO.,
NISSHO CO., LTD.,
LANGLEY & CO.,
AMERSEY DAMODAR,
DRENNAN & CO.,
RALLI BROTHERS, LTD.,
RODOCANACHI & CO.,
VOLKART BROS.,
GILL & CO.,
THE PATEL COTTON CO., LTD.,
VALJI LADHA & CO.,
VIRJI LADHA & CO.,
KHOJA MITHABHAI NATHOO,
HABIB & SONS,
NARSU NAGSU & CO.,
SHROFF COOPER & CO.,
SIVKARAM RAMCHANDER,
HIRJI BHARMAL,
KOTAK & CO.,
HANSRAJ HARJI & SONS,
RAMDAS DOSSA & CO.,
ARJAN KHIMJI & CO.,
KHIMJI VISRAM,
BACHHRAJ & CO., LTD.,
MANJI BHIMJI,
PIROJSHAW R. VAKHARIA & CO.,
GOSHO KABUSHIKI KAISHA,
R. KHIMJI BROTHERS,
TOYO MENKA KAISHA, LTD.,
JAPAN COTTON TRADING CO.

and others.

Enclosure II.

Copy of letter, dated the 26th June 1934, from the Secretary, Bombay Millowners' Association, Bombay, to the Secretary to the Government of India, Department of Education, Health and Lands, Simla.

SUBJECT.—*Prevention of watering and other malpractices in the cotton trade.*

I am directed to forward herewith for the information of Government copy of a letter addressed to the Association over the signatures of more than 40 principal cotton trading firms in Bombay. The question of preventing such malpractices as watering, mixing, etc. has been before the Committee of this Association and also the Indian Central Cotton Committee on various occasions, and it is understood that in accordance with the views expressed by representative trade organisations, the Indian Central Cotton Committee recommended to Government last year that the Cotton Ginning and Pressing Factories Act should contain a clause, providing for the licensing of gins and presses, and that this clause should be made operative in each province by resolution of the Provincial Legislative Council. It would appear that the representations made by the Indian Central Cotton Committee are under Government's consideration, and my Committee, therefore, desire to take advantage of the opportunity to place before Government in some detail their view of the case.

2. It will be remembered that the MacKenna Cotton Committee (1917-18), in paragraphs 226 and 228 of their Report, recommended *inter alia* that all ginning and pressing factories should be licensed; that such licenses should only be granted on certain conditions; and should be withdrawn for breach of those conditions and on proof of such malpractices as damping, mixing and adulteration. The question was subsequently examined by the Indian Central Cotton Committee, and though they do not appear to have favoured an all-India system of licensing gins and presses, they seem to have made it quite clear to the Government of India that each Province should be free to introduce licensing if they found it necessary and practicable, and that the Indian Cotton Ginning and Pressing Bill which was then under preparation should contain a clause to this effect. At a later date (July 1924), the Indian Central Cotton Committee went so far as to state that they were "*convinced that the licensing of gins and presses will* provide the only remedy for mixing in the Punjab".

3. In the Ginning and Pressing Factories Bill, which was introduced in the following September Session, a licensing clause was not included, presumably in order not to prejudice the chances of the Bill in the Assembly. The desirability of counteracting the various malpractices which were found to exist by the MacKenna Committee has always been admitted by Government, but what they wanted the House to do when the Bill was introduced was merely to agree in principle that legislation was required to tackle these abuses and malpractices, and to enable the trade to protect itself and the cultivator against them, as these malpractices severely injured the reputation of Indian cotton and prevented the Indian cultivator from getting an adequate price for his crop. The Cotton Ginning and Pressing Factories Act has now been in operation for more than 8 years and my Committee have been endeavouring to find out whether the objects which Government had in view when the Bill was introduced have since been realised.

4. From representations received from member mills, and the results of the investigations conducted by the Indian Central Cotton Committee on various occasions, it would appear that the existing provisions of the Cotton Ginning and Pressing Factories Act and the Cotton Transport Act have not been adequate to realise fully the objects Government had in view and that the undesirable practices which existed when the MacKenna Committee conducted their investigations obtain even to-day. My Committee, therefore, consider that in the interests of all concerned, the provisions of the Act should be reinforced. They have bestowed considerable thought to the problem and are convinced that the Cotton Ginning and Pressing Factories Act should be amended at the earliest opportunity so as to provide Local Governments with powers to introduce a system of licensing of gins and presses, as, in their opinion, that provides the only effective method of preventing the abuses mentioned in an earlier paragraph of this letter. My Committee are aware of the objections which have been urged against the introduction of a system of licensing, but are convinced that adequate safeguards can be devised to prevent innocent parties being unfairly penalised.

Bombay, March 1934.

THE CHAIRMAN,
Millowners' Association, Bombay.

Dear Sir,

We beg to draw your attention to the following for serious consideration and necessary action.

The malpractice of watering raw cotton at the time of pressing is increasing day by day. It has been doing immeasurable harm to the cotton trade. Indian cotton has ceased to be an investment and watering has become one of the dangerous factors of depreciating its price. Little profit expected to be gained in weight vanishes if the cotton is not soon disposed of after its arrival in the selling market and in addition its colour and class is spoiled which affects its selling price. The fibre of such cotton begins to deteriorate and its quality injured the longer it remains unconsumed. Due to this deterioration its reputation is spoilt in the world market.

If you look to the working of the season 1927-28 you will realise that the trade suffered to the extent of more than a crore of rupees owing to this malpractice of watering when ready Oomra cotton was sold at Rs. 45 per candy below Contract rate.

Under the circumstances, it is the considered opinion of the undersigned that it would be a service to the trade if this evil practice of watering raw cotton is rooted out; and with a view to attain this object, we submit, you should approach the Indian Government to have the Cotton Ginning and Pressing Factories Act amended to the effect that any press owner who waters or allows or assists in watering raw cotton before pressing will be liable to fine or have his license suspended temporarily or permanently.

We beg to remain,
Yours faithfully,

Signed by more than 40 leading cotton merchanting Firms.

Enclosure III.

Copy of letter No. 1868/276, dated the 13th July 1934, from the Secretary, Bombay Chamber of Commerce, Bombay, to the Secretary to the Government of India, Department of Education, Health and Lands, Simla.

SUBJECT.—*Licensing of Ginning and Pressing Factories.*

I have the honour to inform you that the Chamber has been favoured with a copy of the letter addressed by the Bombay Millowners' Association to the Government of India on the 26th June 1934 urging that the Cotton Ginning and Pressing Factories Act should be amended at an early date so as to provide Local Governments with powers to introduce a system of licensing of gins and presses. My Committee desire strongly to support the above representation.

2. In addressing the Indian Central Cotton Committee in 1931 the Chamber expressed the opinion that the application of the Cotton Ginning and Pressing Factories Act needed severely tightening up if that piece of legislation was to prove effective and have the desired effect of preventing the many abuses which, it was alleged, took place either in the ginning factory or in the press house. The Committee had in mind at that time the compulsory licensing of gins and presses and in again addressing the Indian Central Cotton Committee in 1932 they stated that they were strongly of opinion that the time had come for introducing legislation to this end without which they thought it would not be possible to overcome the difficulties and malpractices which had hampered the trade for so long.

3. My Committee consider that the move for increased consumption of Indian cotton by Lancashire lends added force to the need for the proposed legislation which they trust will be introduced at an early date.

Supplementary Note.

The following letter has been sent by the Indian Merchants' Chamber, Bombay, to the Government of India on the above subject :—

"*Copy of letter No. 2173, dated the 23rd August 1934, from the Secretary, Indian Merchants' Chamber, Bombay, to the Secretary to the Government of India, Department of Education, Health and Lands, Simla.*

SUBJECT.—*Re : Amendment of the Indian Cotton Ginning and Pressing Factory Act providing for the licensing of Gins and Presses to prevent watering and other malpractices in the Cotton Trade.*

The attention of this Chamber has been drawn by the Indian Central Cotton Committee and the Bombay Millowners' Association to complaints regarding malpractices such as watering, etc., said to be resorted to by some cotton gins and presses in various parts of the country, and I am directed to address Government in the matter as under.

My Committee recognise that there is a concensus of opinion and pressure from quarters such as the Indian Central Cotton Committee, and the Bombay Millowners' Association in regard to the desirability of amending the Indian Cotton Ginning and Pressing Factory Act with a view to provide the necessary safeguards against such malpractices. In view of this my Committee would not like to oppose the principle of legislation for the licensing of cotton gins and presses for the purpose. They, however, would like to see the detailed scheme regarding such licensing before they can give their final approval to the same. My Committee would also like to emphasise the necessity of affording sufficient opportunities to all the interests and commercial bodies for discussing the detailed scheme.

They would urge, therefore, that in no circumstances any legislation on the subject should be passed until the relevant bill was circulated for public opinion and until genuine and *bona fide* difficulties of owners of gins and presses had been adequately realised and provided for."

APPENDIX II.

SUBJECT 12.—*Cultivation of improved varieties of Cotton in the Barrage areas of Sind—Note by Chief Agricultural Officer in Sind.*

Secretary's Note.

The Indian Central Cotton Committee at its 28th meeting held on the 30th January 1934 considered a note on certain aspects of the development of cotton cultivation in the Barrage areas of Sind submitted by the Chief Agricultural Officer and referred it to the Special Sub-Committee appointed at the 27th meeting to consider the question of a wider market for Indian cottons. This Special Sub-Committee met on the 17th and 19th March 1934 and considered the Chief Agricultural Officer's note with special reference to the policy to be adopted in Sind in regard to the kind of cotton that should be encouraged in the Barrage areas, and unanimously passed the following resolution :—

"In view of the danger to which cotton growers in India would be exposed should a further increase take place in the production of short staple *desi* cotton in Sind, and of the urgency of encouraging the production of long staple cotton in all suitable tracts in India, the Committee is convinced that steps should be taken without delay to establish a compact block of long staple cotton in the Barrage areas of Sind. This calls for co-ordinated effort, including legislation if necessary, intensive seed supply organisation and an improved marketing organisation suitable to local conditions. A special effort should also be made to improve communications and ginning factory facilities in the selected block as quickly as possible. This block should be large enough to produce 300,000 acres of cotton annually when fully developed. The Committee respectfully urges the Government of Bombay to take immediate action to this end before such problems, as mixing, become serious and while conditions are still favourable."

The resolution was submitted to the Government of Bombay for necessary action. The attached letter together with the enclosed printed copy of the Chief Agricultural Officer's note on the resolution now received from the Government of Bombay is for consideration.

The Chief Agricultural Officer in Sind has exhaustively examined in his note the advantages of and the practical difficulties in giving effect to the resolution. They may be briefly stated as follows :—

(*a*) It is admitted that of all places in India, Sind offers the greatest scope for the production of long-staple cotton, the prospective demand for which from home and abroad is encouraging (Paragraph 2).

(*b*) As regards the stipulated *compact block of* 300,000 *acres* it is pointed out that to have such a compact block of so extensive an area of cotton in Sind the whole of the cotton area in Thar Parkar district i.e., the areas fed by the Northern and Southern Jamrao, the Mithrao and the Khipro Canal systems of the Eastern Nara Canal System, has to be set aside (Paragraphs 6, 7 and 8) for long-staple cotton cultivation, as the cotton areas in other districts are neither so extensive nor so suitable as the area in this district for the purpose (Paragraphs 4 and 5).

(*c*) The reservation of a compact block for long-staple cotton means that pressure should be brought upon the present *deshi* cotton growers of this district to give up *deshi* (Paragraphs 3, 8 and 9). Thus to compel the growers to grow a particular variety of cotton is a measure which the Committee had not favoured in the Punjab. How then is it good for Sind (Paragraph 10) ? Mr. Jenkins' personal opinion is that it would on the whole be good for Sind (Paragraph 11).

(*d*) From an analysis of the present *deshi* and American cotton areas in the talukas of Thar Parkar district it is concluded that a compact area of 1¼ lakhs acres only, as indicated in the map, could, with advantage to growers, be set aside in this district for long-staple cotton (Paragraph 12).

(*e*) As to the legislative measures to be adopted to control cotton cultivation in the compact block, the Cotton Transport Act will not be effective on account of the absence of natural boundaries and lack of regular routes of communication in Sind (Paragraph 13). Besides, Sind conditions are unsuitable for a measure like the Madras Cotton Control Act, except as a last resort (Paragraph 14).

(*f*) In any case, the area mentioned in (*d*) does not require to be placed under legislative control (Paragraph 15) provided certain other conditions are satisfied (Paragraph 16).

(*g*) The most important of these conditions requiring immediate attention is the licensing of gins and presses (Paragraph 17). An unobjectionable method of overcoming the opposition of the ginning and pressing industry to licensing is suggested (Paragraph 18).

(*h*) Other matters such as (1) the organization of seed supply, (2) the organization of marketing, (3) the improvement of communications and ginning factory facilities etc. for ensuring the success of the scheme are also discussed (Paragraphs 19 to 23).

(*i*) Paragraph 24 enumerates the actions the Chief Agricultural Officer in Sind would like the Government of Bombay to take on his note.

The Government of Bombay now want the Committee's considered opinion on the various points raised in the Chief Agricultural Officer's note, and particularly those mentioned in paragraphs 10 and 18, viz., (1) why it is considered necessary by the Committee to advocate for Sind a measure which the Committee had not considered suitable for the Punjab, and (2) the possibility of reducing the objectionable aspects of licensing of gins and presses by penalising only definitely fraudulent practices such as watering and false-packing and by introducing a system of "marking" or "branding" cotton bales as a guarantee of their purity and quality. The Government of Bombay also want the Committee to take such action as is deemed suitable on the suggestion contained in paragraph 22 of the note regarding the establishment of direct purchasing agencies within the reserved areas.

From Subject 16 on the Agenda it will be seen that the Sind Cotton Committee has already expressed itself in favour of the early introduction of licensing legislation, and the expediting of seed-organization work. The Committee also decided to refer the question of abolition of the March closure of canals to the Chief Engineer, and to recommend a slight reduction in the assessment on long staple cotton grown in the reserved area instead of a slight increase in the assessment on short-staple cotton, as proposed by the Chief Agricultural Officer.

Copy of letter No. 2160-A/33, dated the 1st June 1934, from the Acting Under Secretary to the Government of Bombay, Revenue Department, Bombay Castle, to the Secretary, Indian Central Cotton Committee, Bombay.

SUBJECT.—*Cotton : Sind Barrage areas : Cultivation of Improved varieties of — in,*

With reference to your letter No. 4235, dated 31st March 1934, I am directed by the Government of Bombay (Transferred Departments) to forward for your information a copy of the note by the Chief Agricultural Officer in Sind on the establishment of a compact block of long staple cotton cultivation in the Barrage areas of Sind. I am to request that the Government of Bombay may be favoured, as soon as possible, with the views of the Indian Central Cotton Committee on the several points raised therein, and particularly those mentioned in paragraphs 10 and 18 of the note. I am also to bring to the notice of the Committee for such action as they may like to take the suggestion of the Chief Agricultural Officer that the possibility of the establishment of "direct purchasing agencies" within the "reserved areas" may be referred to large consumers for opinion.

Note by the Chief Agricultural Officer in Sind on the Resolution passed by the Special Sub-Committee, appointed by the Indian Central Cotton Committee, to consider the question of the possibility of finding wider markets for the cotton produced in India, regarding the establishment of a compact block of long staple cotton cultivation in the Barrage areas of Sind.

The Resolution of the Special Sub-Committee of the Indian Central Cotton Committee runs as under :—

"In view of the danger to which cotton growers in India would be exposed should a further increase take place in the production of short staple *desi* cotton in Sind, and of the urgency of encouraging the production of long staple cotton in all staple tracts in India, the Committee is convinced that steps should be taken without delay to establish a compact block of long staple cotton in the Barrage areas of Sind. This calls for co-ordinated effort, including legislation, if necessary, intensive seed supply organization and an improved marketing organization suitable to local conditions. A special effort should also be made to improve communications and ginning factory facilities in the selected block as quickly as possible. This block should be large enough to produce 300,000 acres of cotton annually when fully developed. The Committee respectfully urges the Government of Bombay to take immediate action to this end before such problems, as mixing, become serious and while conditions are still favourable."

Agreement with objects of the Resolution.

1. I am in entire agreement with the underlying objects of the Resolution passed by the Special Sub-Committee which are the organised and controlled development of long staple cotton cultivation in the Barrage areas and the establishment and maintenance of a sound reputation for purity, quality and regularity of the Sind-American cotton crop among consumers both in India and abroad.

Factors affecting policy of cotton development in Sind.

2. For the reasons briefly outlined below, the further policy of cotton development and extension in Sind must be in the direction of increasing the cultivation of long staple (American and Egyptian) varieties of cotton and of the organised marketing of these superior quality types in a pure and unmixed condition :—

(*a*) The opening of the Lloyd Barrage and Canal Systems has removed the main handicap to the extension of long staple cotton in Sind, viz., the uncertainty of an inundation irrigation supply. The Indian Cotton Committee of 1919 emphasized that there were no prospects of the successful cultivation of long staple cotton in Sind unless the Sukkur Barrage Project was carried out but also stated in its Report that "*provided a perennial supply of water can be assured, we hold the view that there is no other part of India which offers such hopeful prospects of the successful cultivation of long staple cotton*". The results of the work of the Agricultural Department in Sind in cotton cultivation on Government research stations, farms and in the districts, confirm fully the correctness of this opinion.

(*b*) The recent boycott of Indian cotton by Japan has forcibly emphasized the unwisdom of any further extension of the cultivation of short staple cottons with a limited and restricted demand. This is most particularly true in such cotton-growing tracts where medium and long staple cottons—which form the bulk of the demand from Indian and Lancashire mills—can be successfully grown, under irrigated conditions. Sind short staple (*deshi*) cotton has a peculiar and special demand for particular spinning purposes, e.g., hosiery manufacture, and, while admitting that the Japanese boycott bore more heavily on other trade varieties of short staple cotton, e.g., Berars and Central Provinces, than on Sind *deshi*, I would like to point out that the restricted nature of the demand for this cotton is in itself a weighty reason for limitation of the production of short staple cotton in Sind. Trade opinion in Karachi has definitely expressed the view that an extension of the Sind short staple (*deshi*) crop beyond 200,000 bales per annum will most probably result in glutting the limited market for this type of cotton and in a consequent reduction in the price to the grower.

(*c*) The marked additional interest which is being shown in Sind-American (and Egyptian) cottons by spinners in Bombay, Ahmedabad and other mill centres indicates clearly that these classes of cotton fill their requirements satisfactorily and could replace the bulk of the cottons now being imported into India from America, South Africa and Egypt for mixtures for spinning finer counts. Recent trade visitors to Sind from Lancashire have also expressed the opinion that there would be a sure and steady demand for such cottons from Lancashire spinners, if a regular and unmixed supply is available. An extended demand for Sind long staple cotton is therefore assured and, in view of the increasing tendency of Indian mills to "go finer" and the declared policy of Lancashire to use more Indian cotton, may be regarded as permanent.

Difficulty of finding large compact "blocks" in Barrage areas.

3. Turning now to the Resolution of the Special Sub-Committee, I would like to comment firstly on the implications of the term "a compact block of long staple cotton . . . large enough to produce 300,000 acres of cotton annually". To begin with, it seems necessary to remove a misapprehension, which appears to be widely held that the opening of the Lloyd Barrage and Canal Systems has brought large compact tracts of hitherto uncultivated Government waste land under irrigation, which tracts can be sold or leased out in large blocks to cotton-growers on such conditions as Government may think fit to lay down regarding the variety of cotton to be grown, etc. Except possibly in the Right Bank areas, this is not the case. Especially in the main cotton growing tracts, which are confined to the Left Bank, the bulk of the land was in the hands of private owners prior to the opening of the Barrage and "new" lands, i.e., Government waste land, are only to be found in comparatively small areas interspersed among the settled holdings of established zamindars. This being the case, it is clear that the establishment of the "block" of long staple cotton cultivation suggested by the Sub-Committee must involve the co-operation—or the coercion—of large numbers of different landowners and cannot be carried out by the allocation of large compact areas of "new" land on concessionary terms to a few selected cotton-growers.

Annual acreage of cotton required by the Resolution.

4. The Sub-Committee's Resolution calls for the establishment of a large compact "block" of long staple cotton "large enough to produce 300,000 acres of cotton annually." This figure is approximately equal to the total acreage of cotton in Sind before the opening of the Lloyd Barrage and is slightly less than the final forecasted development (in 1951–52) of cotton cultivation on the Eastern Nara Canal Systems, i.e., the Northern and Southern Jamrao, the Mithrao and the Khipro Canals, or, say, the whole of the Thar Parkar district. Where is such an area to be found ?

Thar Parkar District only suitable for early Long Staple Cotton development.

5. At this stage, I desire to make it quite clear that, in my opinion, any large and early development of long staple cotton in Sind must be looked for in the Thar Parkar district only. Nawabshah and Hyderabad districts cannot be considered in this connection at present partly on account of the more favourable environmental conditions for staple cotton production in the Thar Parkar district, i.e., on the Eastern Nara Canal Systems, and partly on account of the higher standard of cotton cultivation in that

tract. In support of this contention, I give below figures for cotton cultivation in Sind (both *deshi* and American) in the past *kharif* season, i.e., in 1933 :—

District.	*Area under cotton.	
	Deshi.	American.
Thar Parkar	142,000 acres.	122,000 acres.
Nawabshah	133,000 „	5,000 „
Hyderabad	59,000 „	19,000 „
Total ..	334,000 acres.	146,000 acres.

Considering that the total area of Sind-American cotton cultivated prior to last year never exceeded 60,000 acres, there would seem to be reasonable grounds for the opinion that the future development of long staple cotton cultivation in Sind must be looked for, primarily, in the Thar Parkar district. It may also be mentioned that the suitability of this district for staple cotton production over Nawabshah or Hyderabad districts has been confirmed by the results of a series of varietal tests of different cottons, conducted throughout Sind on zamindari lands over a number of years by the Agricultural Department.

Present cotton area in Thar Parkar District.

6. Accordingly, the "block" which the Resolution of the Sub-Committee refers to must be looked for in the Thar Parkar district, i.e., on the canals comprising the Eastern Nara System. The total acreage under cotton in this district in the past *kharif* season was approximately 262,000 acres. The Chief Engineer in Sind's weekly statement of progress of cultivation gives the final cotton acreages (*kharif*, 1933) on the main canal systems concerned as under :—

Northern Jamrao Canal Southern Jamrao Canal	.. .. ..	149,624 acres.
Mithrao Canal	.. .. ..	70,591 „
Khipro Canal	.. .. ..	75,341 „
	Total ..	295,556 acres.

This is approximately the cotton acreage which the Sub-Committee's Resolution considers should be produced annually in the established "block" of long staple cotton, i.e., unless any considerable increase in the cotton acreage of Thar Parkar district is possible, the whole of that district would require to be reserved for long staple cotton cultivation to meet the requirements of the Resolution.

Forecast of cotton development in Thar Parkar District.

7. The anticipated development of cotton cultivation in the areas irrigated by the Eastern Nara Canal Systems under the Lloyd Barrage Project is as under :—

1932–33	246,357 (actual).
1941–42	261,200
1951–52	287,800

It is therefore obvious that the development of cotton cultivation in this tract has considerably exceeded the rate of forecasted development. The total cultivable area on the Eastern Nara Canal Systems is 1,956,760 acres and the irrigation supply in the *kharif* season is only available for 27 per cent. of this area, i.e., for 528,300 acres. At a maximum estimate, after allowing for necessary fodder crops, rice cultivation, fallows and uncultivated holdings, not more than two-thirds of this area, i.e., 352,200 acres, can possibly be cultivated with cotton which is only about 50,000 acres more than last year's acreage. This shows that the full development of the cotton area in this tract has already been practically reached.

Implication of Resolution with regard to area.

8. Accordingly, in order to give effect to the Resolution of the Special Sub-Committee so far as the *area* of the compact "block" to be established under long staple cotton cultivation is concerned, it will be necessary to arrange for the whole of the Thar Parkar district, i.e., the areas irrigated by the Northern and Southern Jamrao, the Mithrao and the Khipro Canal Systems to be set aside and reserved for long staple cotton cultivation only and to prevent "by legislation, if necessary", the cultivation of short staple cotton in this selected area.

* Figures are approximate only.

Agricultural considerations on the Sub-Committee's Resolution.

9. In the first place, I propose to examine the possibility and practicability of carrying out the Resolution of the Sub-Committee from the agricultural point of view. What this implies is that no cultivator in the selected "block" should be permitted to grow any cotton other than certain scheduled long staple variety or varieties, i.e., the cultivation of short staple (*deshi*) cotton within the "block" must be completely prohibited. Would such a restriction result in definite hardship to the cotton-growers within the "block"? Is such a limitation of cotton cultivation to long stapled varieties agriculturally possible?

Past proposals for similar action in the Punjab.

10. In the past, similar suggestions for the segregation of definite "controlled areas" for the cultivation of long staple (American) cotton in the Punjab have been placed before the Indian Central Cotton Committee with the object of checking or limiting the damage done to the Punjab-American crop by "mixing" with short staple *deshi* varieties. In 1928, the Indian Central Cotton Committee decided to hold a Conference between representatives of the Punjab and Sind with the Local Sub-Committee to discuss the cotton policy of the Punjab. The first sentence of the Report of this Conference—which was adopted unanimously by the full Committee—was as under:—

"On account of the peculiarities of the soil and the water-supply, the cotton-growers in the Punjab must be allowed to grow different varieties of cotton."

This Report was issued after the Punjab Provincial Cotton Committee had declared as impracticable a proposal, made by a Special Sub-Committee to deal with the mixing of Punjab-American cotton, that the Sargodha area in the Punjab should be constituted as a protected area for Punjab-American (staple) cotton. To my knowledge, soil and irrigation conditions in the Barrage areas of Sind are not more uniform than in the Punjab Canal Colonies and, accordingly, if the Indian Central Cotton Committee adheres to the opinion quoted above, the Resolution of the Special Sub-Committee is, in effect, a request to the Government of Bombay to carry out measures which the Central Cotton Committee has already decided to be impracticable in the cotton-growing tracts of the neighbouring province of the Punjab. I have to suggest, therefore, that a reference should be made to the Committee to restate its position in this connection.

Possibility of reservation of area for Staple Cotton Cultivation in Sind.

11. My personal opinion is that the finding of the Conference as noted above, which was accepted by the Central Cotton Committee, is not justified and that, in regions where "community" i.e., "one variety" cotton cultivation has been established, e.g., in the United States of America, conditions of soil and water-supply are no less diverse than in extensive tracts of the Punjab and Sind. The main difficulty which I foresee is that, in certain years, the Punjab-American crop and, to a lesser degree, the Sind-American crop, is liable to failures, the cause of which has not yet been ascertained although numerous theories have been advanced. Accordingly, the average cultivator grows both American and *deshi* as an insurance against such "failure years". On the whole, however, and taking a farsighted view, I believe that the advantages of "community" cotton growing to the cultivator will far exceed the disadvantages, especially in Sind where such "failure years" of the American crop have, so far, been of very infrequent occurrence.

Suitability of part of Thar Parkar District for reservation for Long Staple Cotton.

12. In the Thar Parkar district of Sind, the areas in each taluka under (*a*) Sind-American, and (*b*) Sind-*deshi* in the *kharif* season, 1933, are given below:—

Taluka.	*Area under cotton. American.	*Deshi.
Digri	39,000 acres	4,500 acres.
Jamesabad	29,500 ,,	3,000 ,,
Mirpurkhas	10,400 ,,	29,000 ,,
Samaro	26,700 ,,	13,700 ,,
Umarkot	7,000 ,,	20,200 ,,
Khipro	8,300 ,,	45,000 ,,
Sanghar	200 ,,	26,400 ,,
Total ..	121,200 acres.	131,800 acres.

In Mirpurkhas and Samaro talukas, the American cotton area is almost entirely in the southern portions of the talukas. From these figures, it will be seen that the cultivation

* Figures are approximate only.

of American, i.e., long staple cotton is already much in excess of the cultivation of short staple (*deshi*) cotton in Digri and Jamesabad talukas and in portions of Mirpurkhas and Samaro talukas south of the Jodhpur Railway line. This area, involving approximately 125,000 acres of cotton cultivation annually, could, I believe, be entirely restricted to the cultivation of long staple American and Egyptian cottons to the ultimate benefit and profit of the cotton-growers of that tract and without any serious dislocation of normal agricultural practice. A sketch* indicating the area referred to is appended to this note. At present and until a higher general standard of cultivation is reached, I do not think that similar action could be taken in any other part of the cotton-growing tracts of Sind—with the possible exception of the new cotton area on the Right Bank—without inflicting undue hardship on the cotton-growers.

Legislation to ensure staple cotton cultivation in a selected area.

13. Turning to the machinery whereby the cultivation of scheduled varieties of cotton only can be established in a selected area, the Resolution of the Special Sub-Committee suggests that this should be done "by legislation, if necessary". In my opinion, such restrictive legislation should be resorted to after all other methods of achieving the desired object have failed as its enforcement would not only antagonise public opinion but would necessitate additional inspecting staffs, etc., and would open the door to abuses and hardships. The Rajpipla State has legislated to prevent the cultivation of any type of cotton other than 1027 A.L.F. within the State boundaries but Indian States have particular advantages in the enforcement of such restrictive legislation. The Cotton Transport Act, which prevents the entry of short stapled cotton into scheduled long stapled areas, is in force in several cotton-growing tracts of India. In Sind, however, the absence of natural boundaries, *e.g.*, rivers round the cotton-growing areas, and the lack of regular routes of communication would make the enforcement of the provisions of a Transport Act both difficult and costly.

The Madras Cotton Control Act, 1932.

14. There remains the Madras Cotton Control Act, 1932, which was obviously in the minds of the Special Sub-Committee when framing the Resolution. This Act prohibits, under penalty, the cultivation or the possession of "Pulichai" cotton, an inferior short staple *deshi* variety, in the Madras Presidency. It should be noted that this Act does not prescribe that any variety of cotton should be grown but is framed with the object of stamping out one very inferior variety only. I do not think that a similar Act could be enforced in a protected area in Sind, especially in regard to such clauses as prohibit the possession of, handling of, or trading in, the short stapled variety. If such a reserved area for long staple cotton cultivation is prescribed in the Barrage areas, it will, in my opinion, be impossible, to prohibit entirely the entrance of short staple cotton into such an area for ginning and pressing and, as suggested in paragraph 16 *seq.* below, other methods of reducing the risk of fraudulent mixing in factories will require to be considered. A modification of the Madras Act to prevent the *cultivation* of short staple cotton within the reserved area might be examined in view of the possibility that other non-legislative measures for this purpose may subsequently be found to be ineffective.

Will legislation for staple cotton growing be necessary in Sind?

15. But will legislation to ensure the cultivation of long staple varieties only in the area mentioned in paragraph 12 above be necessary? In that portion of the Thar Parkar district, *i.e.*, south of the Jodhpur Railway line, American cotton already forms the greater bulk of the cotton crop. The cultivation of mixtures of American and *deshi* cottons in the fields is practically unknown and, on account of certain agricultural advantages, *e.g.*, suitability for early sowing, shorter period of growth, etc., the cultivation of American staple types is becoming increasingly popular with the growers.

Suggested measures to ensure a "block" of staple cotton cultivation in Sind.

16. From the agricultural stand-point, I consider that the establishment of a "block" of long staple cotton cultivation in the area of the Thar Parkar district mentioned in paragraph 12 above, could be successfully achieved within a short period of time if action is taken in the directions suggested below:—

(*a*) The organisation of adequate arrangements for the supply of sowing seed of the desired variety or varieties to the cotton-growers within the "block" at reasonable rates or, to commence with, on credit sales. This subject is dealt with more fully in paragraphs 19 and 20 below.

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*Not printed.

(*b*) The total abolition of the March closure of canals by the Irrigation Department. I attach great importance to this condition. Irrigation water for soaking lands for American cotton sowings must be available not later than the 15th March.

(*c*) The increase of the rate of assessment on *deshi* (short-stapled) cottons grown within the reserved area. This proposal will require examination by the Revenue Department but, to my mind, it would be most effective in achieving the desired object. It would also be justified as *deshi* cotton usually requires more irrigation water than American.

(*d*) The introduction of control, *i.e.*, licensing of cotton ginning and pressing factories in Sind. This subject is dealt with more fully in paragraphs 17 and 18 below.

If, in addition, a co-operative growers' organization, on the lines of the American Cotton Growers' Exchange, could be established to organise and encourage the co-operative marketing of "mark" cotton and auction sales organised and notified in advance to large buyers, I am convinced that, without any further legislative action, a "block" of long staple cotton cultivation could be established in Sind which would extend as a higher standard of agricultural practice develops in the Province.

Licensing of gins and presses.

17. The past history of the Punjab-American cotton crop furnishes definite evidence that mal-practices in ginning and pressing factories mainly mixing of long staple and short staple varieties, can, within a very short space of time, entirely nullify the advantages of any organised efforts to extend the cultivation and maintain the reputation of staple cottons. The subject of the licensing of gins and presses has been discussed *ad nauseam* in the Indian Central Cotton Committee and many resolutions have been passed by that body urging the importance of such action in the interests of the cotton cultivation of India. But no steps towards licensing have yet been taken in British India although certain Indian States, notably Hyderabad and Indore, have been sufficiently farsighted to adopt the necessary measures to protect their cotton-growers from the losses resulting from selfish malpractices on the part of ginners and pressers. I may mention that the mixing of inferior cotton with the better types of Sind-American cotton in gins and presses in the Barrage areas has already been brought to my notice. Accordingly, I am strongly of the opinion that the licensing of all gins and presses in Sind must take place before any organised attempt to extend long staple cotton cultivation on a "community" basis can have the slighest prospect of permanent advantage to the growers.

**Use of special "marks" in licensed factories.*

18. Licensing of gins and presses is opposed by the ginning and pressing interests largely on two grounds, firstly, that "mixing" of different varieties of cotton may take place outside the factories for which the factory-owner will be liable to be held responsible and, secondly, because there is a trade demand for "mixed" cotton. To overcome both these objections, I would suggest that all factories, both gins and presses, should be licensed, that only definitely fraudulent practices, *e.g.*, watering and false packing, should be scheduled as penal offences and that each licensed gin and press should be provided with one or more Government "marks" or "brands" which they will be entitled to stencil or affix to each bale of staple cotton, above a definite standard of purity, which issues from the factory. The fixing of the "mark" or "brand" will be done on the sole responsibility of the press-owner or of his client, the gin-owner, and misuse of this privilege will be penal under the licensing regulations. If such action is taken, I suggest that the "mark" or "brand" denoting purity of Sind-American cotton from a licensed factory will soon become well known to the trade and that such "marked" or "branded" bales will ultimately command a premium in the market and will build up a sound reputation for the Sind-American crop. These proposals will require detailed examination by all interests concerned, but I am convinced that the only way to check "mixing" in gins and presses is to take such steps to make the sale of "pure" cotton more profitable than it is at present. The cotton growers also will soon realize the advantage of their cotton being marketed as "marked" or "branded" bales and encouragement and stimulus will be given to (*a*) the cultivation of pure long staple cotton and (*b*) the sale of lint in place of *kapas* sales, both of which developments are definitely in the interests of the Sind cotton cultivator. All bales from the "reserved area" for long staple cotton in Sind will naturally bear the "mark" or "brand" mentioned above and, in addition, should be stamped with the letters "R.A." to denote that the cotton was grown in the Sind "long staple reservation".

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*Suggested by Mr. R. Fleming, Representative of Lancashire Indian Cotton Enquiry Committee.

Seed supply organization.

19. The Special Sub-Committee's Resolution contains a reference to "intensive seed supply organization" in connection with the establishment of a block of long staple cotton in the Barrage areas of Sind. I agree entirely that such an organisation is essential and that the success of the scheme will largely depend upon its efficient working. In this connection, the Agricultural Department in Sind's seed multiplication scheme for improved cotton varieties which is now in its third year—contemplates the provision of seed of improved staple cotton varieties for a total acreage of 150,000 acres in the fifth year. I would be prepared to arrange to concentrate the entire distribution of this seed in the "reserved area". The bulk of this seed will have to be given out to the cultivators on "credit sale" or paid for by "taccavi" advances which should be liberally given for this purpose in the long staple "block".

Other methods of improving seed supply.

20. In addition, I have to suggest that the introduction of a system of "certification" by the Agricultural Department of seed-growers and ginneries who are prepared to issue on sale "certified" pure seed of the scheduled long staple varieties to cotton-growers within the "reserved area". The establishment of "co-operative seed societies" which is at present receiving the attention of the Sind Central Co-operative Bank, the Bombay Central Co-operative Institute, Sind Branch, and the Co-operative Department in Sind should be encouraged and accelerated, especially in the areas selected for the "community" cotton growing of staple varieties. The re-establishment and re-opening of the existing Government ginning factory at Mirpurkhas, as proposed in the scheme for the development of agricultural engineering in Sind, submitted to Government under my office letter No. 164 of 1933, dated 26th July 1933, would facilitate and intensify the efforts of the Department in providing good seed of improved cotton varieties to growers in the "reserved" area. I would also urge the necessity for the early appointment of a qualified and experienced Agricultural Engineer, as proposed in the same scheme, as the advice and assistance of such an officer in connection with the control and supervision of ginneries, distribution and storage of sowing seed, etc., would be invaluable in connection with the "reserved" area scheme. The cultivation of long-staple cotton varieties, other than those prescribed by schedule for cultivation in the "reserved" area should only be permissible on certificate issued by the Agricultural Department in Sind. This will prevent the introduction of other long staple varieties from different provinces and will assist in maintaining the regularity and evenness of the crop in the "reserved" area which factors are of considerable importance and value to consumers.

Importance of organised marketing.

21. When such schemes for the "community" growing of one or more improved variety of crop is under consideration, the dogma that "the cultivator must be allowed to grow what pays him best" is certain to be advanced. I firmly believe—and obviously the Special Sub-Committee of the Central Cotton Committee believe—that, under organised production and organised marketing the cultivation of long staple cotton in the Barrage areas of Sind must ultimately give the best returns to the cotton-grower. The importance of organised marketing cannot be over emphasized as, under existing conditions in the Barrage areas, where the majority of cultivators are obliged, by force of circumstance, to sell their crops in the form of *kapas* to the ginner or his district agent, the cultivation of staple cotton has little, if any, advantage over the cultivation of *deshi* cotton. The premium offered to the grower of staple cotton for his produce under such a system of sale bears a quite inadequate relation to the intrinsic value of the staple cotton over the short staple varieties when translated into lint prices. In the Barrage areas, under existing conditions of *zamindari* cultivation, *deshi* cotton averages higher yields than the American varieties, and unless the grower of the latter, *i.e.*, American types, can obtain a reasonable premium for quality, it would not only be unreasonable but unjustifiable to endeavour to compel him to restrict his cultivation to the staple cotton varieties. This reasonable premium can only be obtained by improvement and organization of the marketing of staple cotton in Sind.

Means of improvement of cotton marketing.

22. In 1927–28, an investigation into the marketing and finance of cultivators' cotton in Sind was carried out under the auspices of the Indian Central Cotton Committee which revealed the fact that practically all the Sind cotton crop was sold in the villages to agents of neighbouring ginneries. The Central Cotton Committee urged that Co-operative Sale Societies should be formed to provide the growers with a better outlet for their produce. I consider that such a step is essential in conjunction with the establishment

of a "reserved area" for staple cotton cultivation. The increase of ginning facilities, which is rapidly taking place in the Barrage areas, will tend to increased competition and earlier disposal of the crop. Further improvement in marketing will result from (*a*) the introduction of sales of "mark" or "brand" bales (reference paragraph 18 above), (*b*) the establishment of auction sales of cotton produced in the "reserved" area, and (*c*) the extension of a system of lint sales among the growers. These matters have already been dealt with briefly in this note. I have only to suggest further that the large potential consumers of Sind-American cotton would benefit—and would assist in accelerating the increase of pure staple cotton cultivation in the Barrage areas—by the establishment of a direct purchasing agency in the "reserved" area and the association of such an agency with co-operative organizations of growers, *e.g.*, cotton sale societies, and with selected ginning factories.

Communications and ginning factory facilities.

23. Finally, the Resolution of the Special Sub-Committee contains a reference to improvement of communications and ginning factory facilities in the "reserved" area. The first of these problems is already receiving the attention of Government and I have only to suggest that, when a scheme for road development has been drawn up and finances for such work provided, the "reserved" area of Thar Parkar district south of the Jodhpur Railway line should receive priority in such improvement of communications as may be undertaken. With regard to ginning factory facilities, the bulk of new factory construction within the past two years has taken place within the boundaries of the "reserved" area and I do not consider that any special action is needed to stimulate further development in this direction at present. On the other hand, it is essential that the future construction of factories in this area should be carefully regulated to correspond with actual requirements otherwise a situation may arise which will be detrimental to the best interests of the growers.

Suggested action to be taken.

24. In conclusion, I beg to suggest that the undernoted action might be taken, if approved, on the Resolution of the Special Sub-Committee :—

(*a*) A copy of this note—or an abstract of the main points dealt with therein—may be referred to the Special Sub-Committee for consideration and opinion. I have recently been appointed a member of this Sub-Committee and would attend to explain or amplify any of the points under consideration. The Special Sub-Committee should be asked to advise in more detail on the methods they have to suggest for giving effect to the terms of their Resolution.

(*b*) The Resolution (and, if considered necessary) a copy of this note should be referred to the Sind Cotton Committee for opinion. The next meeting of this Committee will take place in June 1934.

(*c*) A copy of this note may be sent to the Collector of Thar Parkar district and to the Chief Engineer in Sind for opinion.

(*d*) A reference should be made to the Indian Central Cotton Committee on the point raised in paragraph 10 of this note.

(*e*) The Remembrancer for Legal Affairs may be consulted with reference to the possibility of the application of a modified form of the Madras Cotton Control Act (1932) to prohibit the cultivation of *deshi* cotton in the "reserved" area and to the introduction of legislation for the licensing of gins and presses in Sind [reference paragraphs 14 and 17—18].

(*f*) The Chief Engineer in Sind may be asked to reconsider the possibility of the abolition of the March closure of the irrigation canals or its modification so as to ensure a supply of irrigation water to the "reserved area" from the 15th March onwards [reference paragraph 16 (*b*)].

(*g*) The Revenue Department—and possibly the Finance Department—will have to be consulted with regard to the proposal for the enhancement of the assessment of *deshi*, *i.e.*, short staple cotton cultivation in the "reserved area" [reference paragraph 16 (*c*)].

(*h*) A note on the "Licensing of gins and presses" is attached. This matter must receive early attention [reference paragraph 17].

(*i*) The proposals for the use of Government "marks" or "brands" on bales of pure staple cotton in licensed factories may be referred to the Indian Central Cotton Committee and to cotton trade organizations for opinion [reference paragraph 18].

(*j*) The Registrar, Co-operative Societies, should be asked to advise on the establishment of co-operative organizations for seed supply and for cotton sale within the proposed "reserved area" [reference paragraphs 20 and 22].

(*k*) The proposals contained in the scheme for the development of agricultural engineering in Sind relating to the appointment of an Agricultural Engineer in Sind and the re-opening of the Government Ginnery at Mirpurkhas require early action [reference paragraph 20].

(*l*) The possibility of the introduction of auction sales of cotton in the "reserved area" requires detailed examination. The Directors of Agriculture, Bombay and Punjab, may be referred to for advice in this connection based upon similar organization in these Provinces in the past [reference paragraph 22].

(*m*) The possibility of the establishment of "direct purchasing agencies" within the "reserved area" may be referred to large consumers, *e.g.*, the Bombay Mill-owners Association for opinion.

(*n*) The question of the improvement of communications in the "reserved area" should be examined as soon as the Report of the Government of India's Road Engineer (Mr. Stubbs) on road development in Sind is received.

(Signed) W. J. JENKINS,
Karachi, 17th April 1934. Chief Agricultural Officer in Sind.

Note on proposals for Licensing of Cotton Ginning and Pressing Factories.

1. The Indian Cotton Committee of 1917-18, appointed to investigate the possibilities of extending the growth of long-stapled cotton in India, recommended (reference Chapter XVI "Commercial" of its Report)—

"(*a*) that all ginning and pressing factories should be licensed, a preliminary to the issue of licenses being the assignment to all factories of distinctive numbers and marks which would enable the cotton dealt within them to be traced;

(*b*) licenses should only be granted on certain conditions and should be withdrawn for breach of those conditions and on proof of such malpractices as damping, mixing and adulteration;

(*c*) all ginning and pressing factories should be brought under the operation of the Factory Act and required to take out licenses, irrespective of the number of hands employed;

(*d*) licenses should be withdrawn by the Local Government on the recommendation of the Central Committee (*i.e.*, the Indian Central Cotton Committee) after the procedure laid down (reference paragraph 229 of Report of Indian Cotton Committee, 1919) has been followed;

(*e*) suitable penalties should be imposed in the case of factories working without taking out a license or after a license has been withdrawn."

2. The conditions proposed by the Indian Cotton Committee for licensing of gins and presses, as stated in paragraph 225 of the Report of that Committee, were examined at the First Meeting of the Indian Central Cotton Committee (July 1921). The general opinion of the meeting was decidedly favourable to licensing proposals. The Central Cotton Committee made certain recommendations thereon and considered that an all-India Act should be passed by the Central Legislature empowering Local Governments to frame rules with a view to giving effect to all or any of these recommendations. It was agreed that the principal Act should enforce the marking of bales and the maintenance of proper press records and the furnishing of statistical returns.

3. The recommendations of the Central Cotton Committee were circulated to Local Governments for opinion and the replies received, together with a draft Bill for the regulation of gins and presses, were considered at the Sixth Meeting of the Indian Central Cotton Committee (September 1923) on a report from the Local Sub-Committee of that body. The Local Sub-Committee recommended that the licensing of gins and presses should be dealt with by including in the Bill an enabling clause only to be brought into effect with the approval of the Provincial Legislative Council. Thus no province need bring the system of licensing into force unless it was required and no province could bring it into force without the approval of its own Legislative Council. The Central Cotton Committee approved the recommendations of the Local Sub-Committee for the inclusion of such an enabling clause in an All-India Act and resolved that the Government of India

should be asked to undertake legislation at an early date on the lines of the draft Bill submitted by the Committee for the regulation of gins and presses and for the compulsory marking of bales, maintenance of records of ownership and periodical statistical returns.

4. At the Seventh Meeting of the Central Cotton Committee (January 1924), certain criticisms of the Government of India on the enabling clause for licensing included in the draft bill were considered. These criticisms referred mainly to the definition of specific offences for which licenses might be suspended and to the nature and enforcement of the penalties in connection with suspension. These criticisms had been examined by the Local Sub-Committee of the Central Cotton Committee who recommended that the offences for which licenses may be suspended should be as follows :—

(1) The mixing of two or more separate descriptions of cotton, the mixing of which has been prohibited by notification under clause 8 of the draft bill.

(2) Fraudulent packing (as defined by the East India Cotton Association).

(3) Damping cotton by means of water deliberately applied for that purpose prior to pressing when such damping has been conclusively proved.

The Sub-Committee, in its report, also dealt with judicial procedure in the matter of suspension of licenses, penalties, etc., and pointed out that licensing of gins and presses in the Sudan was already in force on a much more drastic scale than was proposed in the draft bill.

The modifications suggested by the Government of India were accepted as the Local Sub-Committee felt "that it was of the utmost importance that the enabling clause should not be omitted and were agreed that it was better to modify it now ..... than to risk it being omitted by Government" (Mr. V. A. Grantham, M.L.C., Vice-President, Indian Central Cotton Committee).

5. Discussions took place between members of the Central Cotton Committee and representatives from the Punjab at Lahore (March 1924) and Simla (June 1924) at which the proposals for licensing of gins and presses—which had aroused considerable opposition in the Punjab—were discussed. A report of these discussions was submitted to the Central Cotton Committee in July 1924, when the undernoted Resolutions were passed, only three members dissenting—

"That the Central Cotton Committee, after having given full consideration to the proceedings of a meeting of cotton-growers, ginners and traders with members of the Provincial Cotton Committee (Punjab) held at Lahore on the 19th March 1924, and to the proceedings of the Provincial Cotton Committee (Punjab) held at Simla on the 23rd June 1924, is convinced that the licensing of gins and presses will provide the only remedy for mixing in the Punjab, that is likely to have immediate and practical effect. The Committee also wishes to impress upon the Government of India the desirability of putting the Gins and Presses Bill before the Legislature with as little delay as possible."

6. At the Ninth Meeting of the Central Cotton Committee the Vice-President (Mr. V. A. Grantham) reported that the Cotton Ginning and Pressing Factories Bill had been introduced at the September Session of the Legislative Assembly and circulated for opinion. The Bill was identical with the draft finally submitted by the Central Cotton Committee *except that the important enabling clause (permitting Local Governments to introduce a system of actual licensing) had been omitted.* It had been felt that the inclusion of this clause would prejudice the chances of the whole Bill being accepted and that the question of licensing could be taken up later if it was still found necessary.

7. The Cotton Ginning and Pressing Factories Act (1925) was passed by the Legislative Assembly in March 1925, and, at the request of the Government of India, the Local Sub-Committee of the Indian Central Cotton Committee submitted a draft of the rules under the Act for consideration. These draft rules were considered by the Central Cotton Committee in July 1925, and a Cotton Ginning and Pressing Factories Sub-Committee was appointed for the purpose of dealing with matters, references, etc., arising from the application of the Act.

8. The Central Cotton Committee discussed the question of malpractices in cotton presses, *i.e.*, watering and mixing in July 1927, when the undernoted Resolutions were passed :—

"That in view of the continuance of malpractices in cotton ginning and pressing factories, the question of introducing the actual licensing of such factories should now be re-examined."

"That the Cotton Ginning and Pressing Factories Sub-Committee be requested to report to the next meeting of the Central Cotton Committee—

(*a*) in what areas malpractices are so prevalent as to make necessary the licensing of cotton ginning and pressing factories,
(*b*) for what offences licenses should be suspended or revoked,
(*c*) how such offences are to be defined and proved, and
(*d*) what machinery should be set up for controlling licenses and for dealing with offences."

9. In December 1927, a report from the Cotton Ginning and Pressing Factories Sub-Committee was considered. The Sub-Committee considered that it was necessary that efforts should be made to check malpractices in cotton ginning and pressing factories by firmer action by recognised cotton trade associations in the direction of penalising mixed, watered or seedy cotton before consideration of licensing legislation. The Central Cotton Committee accepted this view and passed a Resolution which stated: "If on further investigation, it is found that adequate action by organised cotton trade associations is not feasible at the present juncture, the Committee consider that further legislative measures will be necessary". At the same meeting, the Central Cotton Committee were informed by the representatives of Hyderabad and Indore States that the Governments of these States had passed rules under the State Cotton Ginning and Pressing Factories Act, penalising by closure of the factory concerned or by fine, the mixing or adulteration of cotton in factories within the State's jurisdiction. All ginning and pressing factories in these two States are required by law to take out a license.

10. In December 1930, the Chief Agricultural Officer in Sind placed a note on some of the more important and imminent problems connected with the future development of cotton cultivation in Sind under the Lloyd Barrage before the Indian Central Cotton Committee. Section C of this note dealt with "the problem of the ginning and pressing factories" and included the paragraphs given below :—

"With the establishment of perennial irrigation in Sind which will shortly become an accomplished fact—few will dispute the opinion of the Indian Cotton Committee of 1919, that there is no other part of India which offers such hopeful prospects of the successful cultivation of long staple cotton. This subject has already been dealt with in part under the sections of this note dealing with the problem of the variety and the problem of the area. The future welfare of the cotton-growers of Sind will largely depend upon the production of such a type of cotton and upon its reputation for purity and cleanliness being established and maintained in the cotton markets of India and of the world.

As one very important condition towards achieving this end, I consider that the *introduction of a system of licensing of ginning and pressing factories in Sind is absolutely essential.*

This Committee is fully aware of all the arguments, both for and against such a system and the practical difficulties which have arisen in the past in this connection. In sind in the future as in the Punjab at present, the cultivation of long and short stapled varieties of cotton must be carried on simultaneously. How far the segregation of these two types can be carried out by areas is discussed in another part of this note. This Committee has, nevertheless, expressed its considered opinion on several occasions that the only real remedy for mixing and other malpractices is the introduction of a system of licensing gins and presses. In my opinion, the opportunity for introducing such a system in Sind will *never be more favourable* than at present and, if the lessons of the Punjab are to be profited from, I consider that this question in its relation to Sind and the future cotton crop of the Barrage area should receive immediate attention."

11. The note was considered by the Agricultural Research Sub-Committee who stated in its report: "The Sub-Committee desires to emphasize that the licensing of gins and presses in Sind is essential to the proper development of cotton-growing in that Province, and hopes that a strong recommendation to this effect will be made by the Central Cotton Committee to the proper authorities". The report was adopted by the full Committee.

12. At the twenty-seventh Meeting of the Indian Central Cotton Committee (August 1933), a full discussion took place on the licensing of gins and presses. The question had been referred to different trade organizations for opinion and the replies received are very briefly summarized below :—

(*a*) *East India Cotton Association, Ltd., Bombay.*—Considers time inopportune for fresh legislation towards licensing, in view of impending constitutional changes.

(*b*) *Millowners' Association, Bombay.*—Convinced that licensing legislation is necessary to check malpractices.

(*c*) *Indian Merchants' Chamber, Bombay.*—Considers time inopportune for licensing legislation.

(*d*) *Karachi Chamber of Commerce, Karachi.*—Is not averse to licensing of gins and presses but desires report by Committee of all interests involved as a preliminary step.

(*e*) *Ahmedabad Millowners' Association, Ahmedabad.*—In favour of legislation towards licensing to check malpractices, *e.g.*, mixing of different varieties.

(*f*) *Tuticorin Chamber of Commerce, Tutieorin.*—In favour of legislation towards licensing of gins and presses and towards preventing growth of mixture in the fields.

(*g*) *Upper India Chamber of Commerce, Cawnpore.*—In favour of legislation towards licensing of gins and presses.

(*h*) *Bombay Chamber of Commerce, Bombay.*—Strongly in favour of licensing legislation.

(*i*) *Karachi Indian Merchants' Association, Karachi.*—Strongly opposed to licensing legislation.

13. Reference to the discussion which took place on the subject of licensing of gins and presses at the Central Cotton Committee meeting shows that the introduction of licensing legislation was generally supported by the representatives of the cotton-growers, the millowners and the Agricultural Departments and opposed by the gin-owners on the main ground that all mixing did not take place in the factories and that the gin-owners would be penalised for malpractices over which they had no control. The Committee finally passed the undernoted Resolution :—

"That the Indian Central Cotton Committee re-affirms its Resolution of 1924 (see paragraph 5 above) recommending to the Government of India that the Cotton Ginning and Pressing Factories Act should contain a clause providing for the licensing of gins and presses and that this clause should be made operative on each province by Resolution of the Provincial Legislative Councils."

14. In Sind, the regulation of gins and presses in the Barrage areas was discussed at the Second Meeting of the Sind Cotton Committee (January 1933) when a Sub-Committee was appointed to consider the question and report at the next meeting. The Report of the Sub-Committee, which was adopted by the full Committee, included a recommendation that the Cotton Ginning and Pressing Factories Act should be amended in order to give enabling powers to Local Governments to introduce legislation, *i.e.*, licensing of gins and presses in the future, should such action be found advisable in the interests of the cotton-growers.

APPENDIX III.

SUBJECT 14.—*Half-yearly Report of the Publicity and Propaganda Officer.*

If the demands on the services of the Publicity and Propaganda Department is any criterion of the growing usefulness and appreciation of its activities, then it may be claimed without any appearance of exaggeration that the Department has progressed a long way towards the realisation of the hopes entertained at the time the Department was inaugurated. Requests for assistance from the Provincial Departments of Agriculture for the purposes of furthering schemes of propaganda, and requests from scientific, trade, agricultural and other associations as well as individuals interested in the production, marketing and manufacture of cotton, for informational matter for enlightenment on findings of scientific interest as well as practical importance, indicated the greater use made of this section of the Committee's activities.

Turning to press propaganda in the country, there was not one first class daily newspaper in India which did not contain a record of or reference to the work of the Committee as broadcast by the Publicity Department. The number of applications received for the Press Communiqués as a result of the intense interest evinced in the various lines of research in this basic industry proved sometimes to be a source of embarrassment to the Department.

Notable Events.—The most notable instances of propaganda campaigns in the realm of "field propaganda", besides a large variety of Publicity and Propaganda work carried out in other directions during the half year under report, are propaganda for (*a*) the

extension of improved cottons in the Barrage areas in Sind, especially in the Right Bank Areas where cotton cultivation had never been attempted before, (*b*) demonstration of the superiority of Jayawant cotton over local Kumpta and the extension of the same in Dharwar and adjoining districts of the Bombay Presidency, and (*c*) propaganda for the furtherence of the "clean-up" campaign launched by the Bombay Department of Agriculture, in a selected area of 180 square miles in Gujerat immediately after the harvest for the removal of all cotton stalks and stubbles and for the eradication of alternative host plants so as to convince the cotton cultivators that a substantial yield in *kapas* could result by starving the Spotted Boll-worm which does considerable damage to the crop.

Making a mention of the assistance given by the Publicity Officer to the Department of Agriculture, Bombay, the Deputy Director of Agriculture, Surat, wrote in paragraph 8 of his letter No. C. 14/2801, dated the 28th May 1934, to the Secretary, Indian Central Cotton Committee, as follows:—

> "The Publicity Officer after seeing the work in full swing in May 1933 brought out very good leaflets and handbills which were of great help for the propaganda work. Besides a number of articles in the daily papers published by the Publicity Officer created wide interest in the subject of Cotton Boll-worm Control Scheme."

These campaigns would have been difficult to attempt but for the free and cheerful co-operation of the Director of Agriculture, Bombay Presidency, and the Chief Agricultural Officer in Sind who had always been found ready and willing to help. That the plans of propaganda and the positive success resulting therefrom met with enthusiastic approbation at the hands of the heads of Agricultural Departments in the Provinces, is a matter to be remembered with much gratification. The work is gradually kindling enthusiasm and manifesting its importance in the respective spheres which bear so close a relation to the well-being of the cotton cultivator, the industry and the trade.

Through its Informational Service the Publicity Department communicated to cotton growers and the general public the practical results of scientific investigations of problems both of all India and local interest. The many sided research activities of the Committee include a study of cotton problems in Provinces and Indian States,—botanical for securing improved strains of cotton by selection and hybridization; physiological for investigation of crop growth; entomological for study of life-history of certain cotton pests and measures to combat them; and mycological for finding out ways to avoid loss due to wilt and root rot.

This work is continuous. The knowledge gained influences the grower and the trade. It emphasises old truths as well as new, so that farm practice may be brought as closely as possible into harmony with scientific research. During the half year under report informational publicity gave special attention to the broadcasting of the Committee's work in Madras. It aided in calling the attention of the authorities and the Government to the enormous loss resulting to the cotton crop from the cotton stem-weevil.

The exact extent of the evil wrought by the pest the Agricultural Department has not yet calculated, but on a rough estimate it has been found that 20 per cent. of the plants die as a result of its attack. This may conceivably be an under-estimate as it is remembered that the incidence of the disease is as great as 80 per cent. in the case of cotton in irrigated tract and 60 per cent. in the case of rainfed varieties.

Guided by information furnished through the publishing of results from the Madras Herbaceum Scheme and the Fodder Cholam Scheme, farmers were reported to be planning important crop readjustment, reducing their acreage of some varieties and increasing the acreage of others. By combining technique with economic information in the manner indicated by the Publicity Department, increased profits are bound to be the outcome.

Foreign Propaganda.

The half year now ending has been remarkable for propaganda in Great Britain and other European countries as well as eastern countries like Japan in keeping them well informed with important improvements effected in the quality of Indian cotton and thus making Indian cottons more acceptable than is the case at present. Unquestionably, a few specific examples that have come to our notice bear testimony to the eagerness with which important illustrated journals such as the "Cotton Trade Journal", United States of America, the "Empire Cotton Growing Review", London, "The Textile Recorder", Manchester, "The Textile Weekly", Manchester, "The Textile Manufacturer", Manchester, have written leaderettes based on the material furnished by the Publicity Department of the Committee.

In thus disseminating knowledge regarding Indian cotton to the outside textile world, through the columns of foreign papers and journals, the Publicity Department has striven to promote permanently the end of production, *i.e.*, consumption. Press Communiqués and other important publications were sent, among other organisations, to all Spinners' Associations, both local and foreign so that their constituencies might absorb more and more of the Indian growths. Among important organisations, which received the publicity material, may be mentioned the Lancashire Indian Cotton Committee, Manchester, International Federation of Master Cotton Spinners' and Manufacturers' Associations, Manchester, Fine Cotton Spinners' and Doublers' Association, Ltd., Cheshire, Oldham Master Cotton Spinners' Association, Oldham, British Association of Managers of Textile Works, Bolton, United Textile Factory Workers' Association, Oldham, Japan Cotton Trading Company, Bombay, Gosho Kabushiki Kaisha, Ltd., Bombay, Sri Krishna Mills, Ltd., Mysore, Toyo Menkwa Kaisha, Ltd., Bombay, etc.

Propaganda to promote cotton cultivation on Indus Right Bank Areas.

Propaganda for the extension of improved cottons on the right bank areas of river Indus under perennial irrigation assured by the Lloyd Barrage Canals was undertaken among growers on an extensive scale.

A finely printed, colour illustrated pamphlet with excellent get-up indicating (*a*) the improved type of Punjab-American (4F–18) being more suitable for this tract than 27 W. N. (improved *Deshi*), (*b*) seed rate and irrigation and (*c*) time and method of sowing, was prepared for the occasion and 1,500 copies were distributed in the Sind area.

The Publicity Officer took the opportunity of his visits to Sind to carry on propaganda among the growers on the spot and thus to further the progress of the campaign.

The Publicity Officer is well satisfied that his personal visits have greatly facilitated his work which indeed cannot be carried on vigorously unless constant touch is maintained with local conditions.

The visit was supplemented by Press Propaganda and an illustrated article in the "Sind Observer" and in one of the vernacular local dailies to interest the public in cotton cultivation and its development in Sind, and so to create a favourable setting for the activities of those who are charged with the work on the spot. The campaign received generous support from the Press throughout the Province, and in the editorial and news columns the newspapers gave prominence to the Committee's propaganda plans. This indicated a sympathetic understanding of the work of the Committee in Sind and its ultimate objective.

A popular illustrated leaflet on the "Improvement of cotton in Sind" was issued by the Publicity Department, describing the work of improvement on cotton at Sakrand and the extension of improved seed with financial assistance from the Indian Central Cotton Committee. It deals with the improved strains evolved from the four main classes of cotton, viz., Punjab-Americans, imported Americans, Sind *Deshi* and imported Egyptians. The improved strains evolved on account of better yield, higher ginning percentage or superior quality by botanical selection and stabilization are the 4F–98, 289F, Sea Island 2–4, Boss III–16 and 27 W.N. A considerable number of copies of this pamphlet were distributed widely among cotton associations, trade organisations and district and *tahsil* agricultural associations in Sind. Nor was the Publicity Department unmindful of the interests of the foreign cotton growing, trading and manufacturing organisations, because copies of this important leaflet were sent to all countries consuming Indian cotton in Europe, United States of America, China, Japan, East Africa, Malaya and Australia.

The campaign received further stimulus by the issuing of an attractively designed poster entitled "It pays to grow cotton in Sind" with a view to bringing appreciably larger areas under cotton on the Indus Right Bank. The poster draws the attention of the cultivators to the fact that while the grower of jowar gets only Rs. 20 per acre and the grower of rice obtains only Rs. 30 per acre, the grower of cotton prospers with Rs. 50 per acre. Although the Publicity and Propaganda Department's work was limited to the display of these posters on the Right Bank areas of river Indus, such an insistent demand for this poster has come from all over the country and also from Europe and America that within the limits of the stock available, free issue had to be confined only to special cases. Indeed both in design and usefulness this poster has been considered to be so nearly perfect that the force of its appeal cannot but drive its message home to the literate and illiterate, old and young alike.

Sir Richard Jackson was much impressed by the poster and expressed a wish that it should be given wide publicity in England and other European countries. Accordingly photographs were taken of this poster and sent to various papers for reproduction along with descriptive notes. The "Textile Recorder", Manchester, the "Textile Weekly",

Manchester, the "Textile Manufacturer", Manchester, the "Textile Industry", Ahmedabad, the "Indian Textile Journal", Bombay, the "Times of India" and the "Bombay Chronicle", Bombay, and the "Hindustan Times", Delhi, enhanced the immense potential value of the poster by giving a prominent place to the poster in their pages with the explanatory notes.

Encouraging cultivation of Jayawant.

The Publicity Department has pursued during the half year a similar campaign of popularising Jayawant in preference to local Kumpta in Kumpta-Dharwar area and adjoining districts of Bombay Presidency, and the Hyderabad State. A Kanarese poster was specially prepared with the assistance of the Director of Agriculture, Bombay, featuring a Jayawant plant and money falling from it into a Dokra—a typical bag used in the locality for gathering cotton. Facts and figures are given showing the advantages of growing Jayawant in those areas. Good progress has been made in the display of these posters which have become familiar to cotton cultivators in those areas. A great step forward was taken to display these posters at the Chikodi Agricultural Show, held in March, where literacy being yet in early stage of infancy the posters were of great use to the bulk of growers and were produetive of the greatest influence on the progress of Jayawant cultivation in the areas demarcated for the purpose. The Director of Agriculture, Bombay Presidency, commended the poster as "a very good one".

Broach Clean-up Campaign.

The clean-up campaign in Broach to convince the grower that a substantial increase in the yield of *kapas* would result by pulling out all stalks and stubbles by the 15th of May and thus starving the boll-worm of its food supply was carried on by the Department during the half year under report. The Publicity Officer continued to devote attention to this positively useful propaganda work of the Committee. The programme included the distribution of illustrated leaflets in Gujerati "Get more money for your cotton crop by removing roots with a plant puller and thus exterminate the Boll-worm" in the Broach district. Reinforced by an illustrated handbill depicting the plant puller at work and showing the advantages of our project by means of illustrations of a protected and unprotected plant the Publicity Department was able to induce the masses to take advantage of the valuable information contained therein and improve their economic well-being.

While dealing with propaganda through the use of posters it is interesting to record that because of their successful display, the demand for the poster entitled "India's Bid for Supremacy in the World's Cotton Markets" having far exceeded the stock available, a third edition was printed in English, Hindi, Gujerati, Marathi, Sindhi, Urdu, Gurmukhi, Kanarese and Tamil. The printing of a Telugu version for the cotton growing tracts like Cudappah, Kurnool and Bellary of the Madras Presidency is under preparation.

Leaflets.

In addition to the propaganda activities the Department furthered its educational efforts by continuing to issue printed publications to broadcast findings of great economic importance. The leaflets were :—

(1) "*Hyderabad Botanical Scheme*".—Printed in Urdu, Kanarese and Marathi at the suggestion of the Agricultural Department, Hyderabad. This leaflet describes the work that is being carried out by the Indian Central Cotton Committee in co-operation with the Government of His Exalted Highness the Nizam of Hyderabad with a view to evolving a strain of Gaorani cotton of a higher yield and ginning outturn than the present strain. Copies of this leaflet have been forwarded to the Secretary to the Nizam's Government, the Director of Agriculture, Hyderabad, to the Cotton Research Botanist, Parbhani, and to the vernacular presses likely to publish them.

(2) "*Institute of Plant Industry*".—This illustrated leaflet printed in Hindi and Marathi deals with the fundamental causes which led to the formation of the Plant Institute in 1924, and the work accomplished to date in the improvement of raw cotton in India. The Empire Cotton Growing Review commenting on the English version published in the form of Press Communiqué observes ".....One of the important achievements of the Institute of outstanding prominence has been the standardising of the process known as the Indian Compost Process, for rapidly converting farm waste into a valuable organic compost manure at a small cost". 1,000 copies in each of Hindi and Marathi were printed and the Director of the Institute of Plant Industry was supplied with a sufficient number for free distribution.

(3) " *Verum Cotton* ".—This Hindi leaflet describes the co-operative scheme started in 1930–31 with the object of securing an adequate price for the growers and maintaining supplies of pure seed. 1,200 copies of this have been printed and a large number was forwarded to the Director of Agriculture, Central Provinces, for distribution. They were sent to the vernacular presses as well.

(4) Copies of the illustrated leaflet in Gujerati entitled " *Get more money for your cotton crop by removing roots with a plant puller and thus exterminate the Boll-worm* " were reprinted for distribution in the Broach district. An illustrated handbill featuring the plant puller at work and a protected and unprotected plant was also reprinted to accompany the leaflet.

(5) " *Summary of Proceedings* ".—A summary of the discussions of the subjects that came up for consideration at the 28th meeting of the Indian Central Cotton Committee held in Bombay on the 29th and 30th January 1934 was again prepared by the Publicity Officer in a less formal manner for the benefit of members of all Chambers of Commerce, Trade Associations, Co-operative Societies and others.

The demand for publicity literature continues to be heavy.

Exhibitions and Shows.

During the period with which this report deals, the Publicity Department has again to its credit an excellent record of displaying cottons and yarn exhibits from improved Indian cottons. In April last, the Department took part in the " *All-India Khadi Exhibition* ", Bombay, under the joint auspices of the Bombay Swadeshi League and the All-India Spinners' Association. In compliance with a request from the Secretary of the Exhibition Committee, 16 samples of *kapas* with an equal number of lint samples from the following cottons were attractively exhibited, in containers with well-designed labels which compelled attention, with a view to popularizing the use of these cottons : (1) Jayawant, (2) Gadag I, (3) Surat 1027 A.L.F., (4) Wagad 8, (5) 4F, (6) Punjab-American 289F, (7) Mollisoni, (8) Aligarh A19, (9) C. 402 (Madheganj), (10) Verum 262 (Nagpur), (11) Verum 262 (Akola), (12) Umri Bani, (13) Cambodia Co. 2, (14) Nandyal 14, (15) Hagari I and (16) Karunganni C7. About a dozen posters " India's Bid for Supremacy in the World's Cotton Markets ", " It pays to grow cotton in Sind " and " Encouraging Jayawant in preference to local Kumpta " were displayed. The Exhibition lasted for a fortnight and provided an almost ideal opportunity of bringing home to enormous number of people who visited it, the pre-eminent importance of cotton in developing the indigenous industry of the country and in making finer goods in India, which has been a prerogative of other nations for many decades.

A large number of people showed great interest in the Exhibits of the Indian Central Cotton Committee, and it is pleasant to record that our enterprise was rewarded by many enquiries from traders and from the public regarding the various types of Indian cottons used in Indian mills and exported to foreign countries in which they were interested, especially in view of the low prices now obtainable for cotton.

Publicity literature was distributed to interested visitors. Demonstrations on the spinning performances of the various cottons exhibited were given by an assistant from the Technological Laboratory and a statement showing the spinning details of each of the cotton samples was distributed freely to crowded audiences.

The wholehearted co-operation of the Indian Central Cotton Committee in the Exhibition was acknowledged in a letter from the Secretary of the Exhibition who, *inter alia*, said " .....My Committee desire me to express their sincere thanks to the Indian Central Cotton Committee for their co-operation and help in making the Exhibition a complete success ".

" I should like to add an expression of my gratitude for all the advice and assistance which you afforded me during the Exhibition and for answering questions of a technical nature regarding the agricultural improvements effected in Indian cottons in a language understandable by the layman. These and other matters of interest to cotton growers, tradesmen and manufacturers which were the subject of your talks were, I am glad to add, greatly appreciated by all sections of people."

" *Indore Exhibition* ".—Another Exhibition in which the Publicity Department participated was the Indore Exhibition held in March under the patronage of the Government of His Highness the Maharaja Holkar of Indore.

Publicity material, including posters, pamphlets and leaflets, etc., were freely distributed among cotton cultivators, traders and businessmen.

A leaflet describing the work of the Institute of Plant Industry, Indore, on the improvement of cotton was read with special interest.

"*Agricultural Show at Chikodi*".—In the Belgaum District was the third show in which the Publicity Department participated with success. This show was conducted on the 22nd, 23rd and 24th of March by the Belgaum District Agricultural Show Committee, Chikodi. A demonstration on the working of the Seed Multiplication and Distribution Scheme of Jayawant cotton in Athani centre was arranged by the Deputy Director of Agriculture, Dharwar, and the Cotton Superintendent, S. M. C., Dharwar. A special poster designed to assist the Bombay Department of Agriculture in the extension of "Jayawant" in the Dharwar area in preference to local Kumpta was displayed and proved most useful. A large number of pamphlets, leaflets and other publicity literature such as the Committee's brochure and bulletins were supplied to the Deputy Director of Agriculture for free distribution. These enabled emphasis being laid on the improvements effected in cottons grown in that part of the Bombay Presidency.

Enquiries.

"As regards your publicity work" observes Sir Richard Jackson, Chairman of the Lancashire Indian Cotton Committee, Manchester, "I think your reports give the public a valuable idea of the time, money and effort devoted to the product, the cultivation and marketing of which we have so much at heart".

A large number of enquiries were received and attended to by this Department of the Committee from this country as well as from abroad. The British Cotton Growing Association, Baghdad (Iraq), was enlightened on the use of fuzzy cotton seed for feeding cattle and the measure of success achieved in breeding naked-seeded long-stapled strains in the Punjab. Dr. Walter Schuck, Palestrina, Amsterdam, wrote to us "I have read with great interest your article in the "Times Weekly" of to-day. As you certainly know, Germany is one of the biggest consumers of cotton, and I think there would be certainly a still better market for Indian cotton, if the problems in question would be discussed in the press. As a correspondent of one of the biggest German textile papers "Der Konfektionar" and other leading economic reviews, I shall be very glad to get from you some informative material on Indian cotton, perhaps also photos". All the published information on the subject was accordingly supplied as also some of the leaflets and press communiqués which were of interest. Enquiries of this kind from distant foreign lands encourage the belief that the widening of informational service has lately attracted growing attention from both the trade and the general public here and abroad. In India there has been an appreciable quickening of interest in the activities of the Committee, as evidenced by enquiries such as those from H. A. Barnett & Co., Calcutta (regarding Pink Boll-worm Scheme Press Communiqué, and asking for further information); Jalalpur (plant puller); Trivandrum (general information about the Committee); Tinnevelly (publications); Karachi and Ankleswar (publications and posters); Udipi (enquiry as to where samples of West Indian cottons could be obtained); Ellerman Arracan Rice and Trading Co., Ltd., Calcutta, (details of damage done to cotton plants by Boll-worms); Adoni (posters and publications); Jodhpur (particulars of Jayawant cotton); and from Palej (details about the quantity of cotton crop in the various parts of India).

Press Communiqués.

Communiqués on the following subjects by the Department received wide publicity in a large number of newspapers in all parts of India :—

(1) *Report of the 28th meeting of the Indian Central Cotton Committee.*—A short description of the important discussions at the meeting of the Indian Central Cotton Committee on the 29th and 30th January 1934, like the prominent role played by cotton in the relations between India and the United Kingdom in the past, and its prominent place in the future relations of the two nations.

(2) *The harmful effects of cholam on succeeding cotton crop.*—Indicates the results obtained to date by the Madras Fodder Cholam Scheme financed by the Indian Central Cotton Committee. It reviews in brief the effect of stubbles, the experiments made at Coimbatore to find out whether any of the observations of research will hold good under Coimbatore conditions, and percolation experiments.

(3) *Cotton Research in the Punjab.*—This has been issued at the advice of the Director of Agriculture, Punjab, to counteract the wrong impression created regarding the use of fuzzy cotton seed for feeding cattle.

(4) *Review of the Annual Report of the Indian Central Cotton Committee, Bombay, for the year ending 31st August* 1933.—A summary describing the activities of the Committee; legislation for the better growing and marketing of cotton, compilation of cotton statistics of value to the trade, research directly carried on under its auspices and others promoted by the grant of subsidies to Departments of Agriculture in the Provinces and States, Seed Extension Schemes and the publicity and propaganda to create and stimulate public interest in the growth and fortunes of cotton, the most important money crop in India.

(5) *Pempheres and Physiological Scheme.*—Deals with the entomological and physiological investigations that are being carried out into the methods of fighting out the cotton stem-weevil—an important pest in the Madras Presidency, and at ascertaining the causes for the greater damage by the pest on some cottons than on others.

(6) *Madras Herbaceum Scheme.*—Gives in short the efforts made by the Committee to evolve by breeding methods a suitable strain possessing the yield, ginning and spinning qualities of Karunganni, combined with the colour and root system of Uppam and the results so far obtained.

(7) *Madras Fodder Cholam Scheme.*—A note on the investigation into the harmful effects of fodder cholam when compared with cumbu on the succeeding cotton crop and the method of attack on the problem from the points of soil moisture, soil nitrogen, distribution of cholam and cumbu roots in the soil and the rate of their decomposition and the important findings thereof.

(8) *Development of Cambodia cotton in Coimbatore District.*—Deals with the condition of Cambodia cotton crop in Coimbatore district prior to 1918–19 and the lines of development thereafter.

In addition to the communiqués mentioned above, a special series of articles drawing attention to the Technological Laboratory's work at Matunga in the following directions were issued :—

(1) *High Draft System of Spinning and their importance to Trade* (2) *Yarn testing and its importance to cotton mills.*—These two articles deal with the experiments conducted at the Technological Laboratory of the Committee on spinning and yarn-testing, and the importance of the useful findings to trade and cotton mills.

Promotion activities with respect to India's cotton production this year and thereafter.—Another article also issued deals in the main with the Committee's research and seed extension schemes in progress and the prospective ones.

Commercial Survey of Indian Cottons.—This article gives a short account of the various improved varieties of Indian cottons grown in the different parts of India. Its publication will be of interest to the trade.

Tours.

During the half year under report, the Publicity Officer visited Coimbatore, Koilpatti and other important centres in the Madras Presidency in connection with the work of the Committee. He attended the 5th meeting of the Sind Cotton Committee held on the 14th June at Karachi at which various steps which would help to accelerate the pace of demonstration and propaganda work in the Barrage area were discussed. He later made a tour of the important cotton centres in the Hyderabad district.

These tours were found to be of great value in keeping the Publicity Officer in intimate personal contact with propaganda problems and enabling him usefully to contribute to the development of cotton in the light of the information collected during the tours.

Future Programme.

The most notable achievement of the Publicity and Propaganda Department of the Committee during the period under report has been the appreciable quickening of interest in the work of the Indian Central Cotton Committee among cotton growers who put the results of scientific investigations into practice. Excellent material progress has been made on the three active propaganda projects described in the preceding pages. By far the most important portion of the propaganda scheme is that relating to the improvement of the economic conditions of the grower and his national well-being. The work done has clearly shown that this type of beneficial activity is of such real consequence to the agricultural population in the districts that ready appreciation will be forthcoming from even the illiterate peasantry of the advantages of improvements in cotton.

By widening the field of propaganda, the necessity for which is overwhelming, the Indian Central Cotton Committee can, with certainty, hope to win for Indian cotton a worthy place in the world's markets in the not too distant future and to ensure a lasting basis of prosperity. The usefulness and importance of the activities of the Indian Central Cotton Committee is gauged not merely by the scientific investigations that its staff conducts, but by the confidence it inspires in the public through its Propaganda Department.

Besides other channels of publicity previously followed, the Department will continue its efforts to diffuse useful information on the diversified activities of the Committee connected with cotton in the most general and comprehensive sense. It has in hand the preparation of a revised edition of the pamphlet called the "Indian Central Cotton Committee: Its Objects, Activities and Achievements" in which will be set out vividly and simply the general significance of the Committee's beneficial activities.

Valuable research results obtained at considerable cost cannot be kept under bushel. The success achieved by the Surat Entomological Scheme and the results obtained from the Clean-up Campaign against Boll-worm in Gujerat are of such vital importance to the well-being of the cultivator and the cotton trade, that the Publicity Department would consider it an imperative necessity to bring out an illustrated pamphlet embodying the findings.

The Department proposes also to issue an illustrated pamphlet describing what has been done so far in the Madras Presidency by the Cotton Committee in co-operation with the Department of Agriculture, Madras, in effecting improvements in the quality of cotton, combating pests and expansion of improved varieties.

It would likewise continue to assist the Chief Agricultural Officer in Sind in his endeavour to encourage cultivation of cotton on Indus Right Bank areas, and for that purpose will issue a vernacular edition of the propaganda illustrated leaflet, with the reproduction of the Poster "It pays to grow cotton in Sind" on the front page.

Press releases and radio broadcast will supplement publicity literature. Newspapers, magazines and periodicals will be carefully nursed, by means of which useful information will reach the people in a suitable form.

The Publicity Department may be allowed to convey its thanks to office-bearers and members of the Committee for the encouragement it has received and to express the hope that the Provincial Departments of Agriculture will continue to give their co-operation and assistance in the future, as they have done in the past.

APPENDIX IV.

SUBJECT 19.—*Schemes of the Committee—Report of the Special Meeting of Agricultural Research Sub-Committee.*

A memorandum on the agricultural research schemes prepared by the Secretary at the instance of the Standing Finance Sub-Committee was considered by that Sub-Committee at its 126th meeting held on the 19th January 1934, and referred to the Indian Central Cotton Committee for further consideration in the light of the expenditure so far incurred on agricultural research, the future commitments of the Committee with regard to current schemes, and the general financial position of the Committee. The Indian Central Cotton Committee, at its 28th meeting held on the 30th January 1934, considered this subject and decided to call for a report on it from the Agricultural Research Sub-Committee and passed the following resolution :—

Resolution 20.—"That a special meeting of the Agricultural Research Sub-Committee be fixed as early as feasible in April, but not later than May 15th, to consider the papers on Subject 34 of the Agenda of this meeting, and that all members of the Agricultural Research Sub-Committee, specially technical members, be asked to submit their memoranda to the Secretary not later than 31st March 1934."

It was also decided that the scope of the enquiry should be extended to seed schemes as well and that the question of maintaining a minimum balance on hand raised by the Vice-President should be considered at the next meeting of the Committee along with the report of the special meeting of the Agricultural Research Sub-Committee.

In pursuance of the above resolution, a special meeting of the Agricultural Research Sub-Committee was convened on the 29th June 1934, as on account of unavoidable circumstances it could not be held earlier. The Sub-Committee met on the 29th and 30th

June 1934, and examined in detail all the schemes both agricultural and seed-extension, and arrived at the following conclusions and recommendations :—

(*a*) It was agreed that the undermentioned schemes had yielded no useful or practical results of value —

(1) Surat Physiological Scheme.

(2) Dharwar Plant Breeding work for the improvement of Upland American cotton.

(3) Central Provinces Mycological Scheme.

(4) Punjab Entomological (Pink Bollworm) Scheme.

(*b*) The undermentioned schemes were adjudged as having yielded useful results—

(1) Surat Entomological and Clean-up Schemes.

(2) Dharwar Wilt Scheme.

(3) Khandesh Cotton Breeding Scheme.

(4) Central Provinces Botanical Scheme.

(5) United Provinces Pink Bollworm Scheme.

(*c*) It was decided that the following schemes, which were practical, should be allowed to continue—

(1) Madras Herbaceum Scheme.

(2) Madras Fodder Cholam Scheme.

(3) United Provinces Cotton Survey Scheme.

(4) Punjab Botanical Scheme.

(5) Punjab White Fly and Spraying Trials Schemes.

(6) Punjab Root Rot Scheme.

(7) Punjab Physiological and Biochemical Scheme.

(8) Punjab Defibrating and Delinting Scheme.

(9) Sind Physiological Scheme.

(10) Bengal Comilla Scheme.

(11) Hyderabad Botanical Scheme.

(12) Hyderabad Cotton Survey Scheme.

(13) Baroda Root Rot Scheme.

(14) Burma Cotton Improvement Scheme.

(15) Bikaner Gang Canal Scheme.

In the case of Nos. 1, 2, 3 and 14 it was specifically decided that they might be allowed to continue till the end of their sanctioned periods only and that no more extension should be granted to No. 14 after that.

(*d*) No decision could be reached on the following schemes as they were all new schemes and it was too early to pass any judgment on them :—

(1) Jalgaon Cotton Breeding Scheme.

(2) Broach Cotton Breeding Scheme.

(3) Bombay Small Leaf Disease Survey Scheme.

(4) Madras Nadam Cotton Breeding Scheme.

(*e*) The following special recommendations were made with regard to other schemes :—

(1) The question of continuance of the Madras Pempheres and Physiological Scheme should be further discussed by the Indian Central Cotton Committee at its next meeting.

(2) The Agricultural Research Sub-Committee at its next meeting should consider the possibility of co-ordinating the Central Provinces Entomological Scheme with the Hyderabad Pink and Spotted Bollworm Scheme.

(3) The question of continuance of the Punjab Spotted Bollworm Scheme might await its first year's report.

(4) The consideration of the United Provinces Pink Bollworm Extension Scheme should be put off till the scheme was finally adopted by the United Provinces Government.

(*f*) The following general policy in regard to schemes was also laid down :—

A. AGRICULTURAL RESEARCH.

(1) Local Departments of Agriculture should, as hitherto, continue to submit research schemes.

(2) A complete and thorough summary of the up-to-date work done and the knowledge gained on the problem in question in other parts of the world should accompany each scheme.

(3) A special Sub-Committee of expert members should be appointed to examine every new scheme and find out if, in preparing it, the officer concerned had complied with item (2) and had taken into account all published work, and consulted competent authorities on the subject.

(4) Hereafter the Committee's money should not be spent where provincial money was available.

(5) All entomological and mycological schemes should be scrutinised more thoroughly and that whenever possible Universities should be invited to take up entomological and mycological problems and small schemes involving fundamental research.

(6) The Agricultural Research Sub-Committee should, after examining the new schemes, frame a wider programme for the whole of the area having the same problem and decide where the main research should be carried out, and where sub-stations, if necessary, should be opened.

B. SEED DISTRIBUTION AND EXTENSION.

Though no departure from the accepted policy in regard to seed schemes is necessary, in future all new seed schemes should be subjected to a very thorough and careful scrutiny before they are sanctioned.

C. PUBLICITY AND PROPAGANDA.

Publicity and Propaganda scheme should be made permanent.

D. INDORE INSTITUTE.

The work done at the Institute of Plant Industry, Indore, during the Directorship of Mr. A. Howard (now Sir Albert Howard), in furtherance of the object, viz., the improvement of cotton, for which the Institute received its main support from the Committee, has produced no tangible results. As attention was concentrated during this period on propaganda work and compost, instead of research into cotton problems as was originally intended, the money so far spent on the Institute by the Committee is as good as practically wasted. The new programme of work initiated by the new Directorate appears to be promising and worthy of being given a fair trial, provided adequate safeguards can be devised to ensure that approved programmes are actually carried out and not neglected as before. To achieve this end a more effective control by the Committee over the affairs of the Institute, than has hitherto been the case, should be secured. This is possible only if the Committee has an absolute majority on the Board of Governors. A revision of the existing position of the Indian Central Cotton Committee on the Governing Body being therefore necessary, a report from the President in that direction might be awaited.

It was also decided that it was necessary to have a Central Research Station for cotton and that for the present it should be the Institute.

E. GENERAL.

With regard to the complaint of Mr. W. Roberts that the Hyderabad State had been liberally treated by the Committee in the matter of financing schemes put up by the State, the Sub-Committee was unanimous that no departure should be made in its policy of sanctioning schemes submitted by the State on their own merits.

Differing from Mr. Roberts regarding the alleged mismanagement of cess funds by the Standing Finance Sub-Committee, the Sub-Committee placed on record its deep appreciation of the work done by the Standing Finance Sub-Committee,

APPENDIX V.

SUBJECT 23.—*Technological Research—Summary of Progress Report of the Director, Technological Laboratory.*

PROGRESS REPORT (No. 22) OF THE DIRECTOR, TECHNOLOGICAL LABORATORY.

INTRODUCTION.

This, the 22nd progress report, covers the period from 1st November 1933 to the 31st May 1934 and presents an outline account of the work done in the Laboratory during this seven months' period and from which it will be seen the Laboratory has once again maintained a high level standard of work done. The work so described is divided, as usual, under the following five heads :—

I. Spinning Laboratory.
II. Research Laboratory.
III. Moisture Testing Section.
IV. Publications.
V. General.

I. SPINNING LABORATORY.

The total number of samples received for test during this seven months' period are classified in the six categories shown in the following Table No. I. Figures for the corresponding period of last year are also given for the purpose of comparison :—

TABLE I.

——	1st November 1933 to 31st May 1934.	1st November 1932 to 31st May 1933.
Agricultural Departments	200	262
Standard cottons	15	17
Trade samples	32	31
Fibre test samples	22	46
Yarn test samples	2	13
Special test samples	40	55
Total ..	311	424

Compared with the corresponding period of last year the total number of samples received at the Laboratory during the present seven months' period under review shows a decline of 113 samples the bulk of which are agricultural samples. Much of the late arrival of samples has been made up by the receipt of 75 agricultural samples within six days of the closing date of this period. The total number of samples spun during this present period exceeds the number received by 30 per cent. Little or no difference is recorded in the number of standard and trade samples received which shows these samples were received in time.

The number of samples and lots spun either as a combined spinning and fibre test or as a spinning test only during this period is shown broadly classified in Table II. The

number of separate spinnings, or counts spun, is also given for each of the nine classifications. Corresponding figures for the same period of last year are given in the table for comparison.—

TABLE II.

	Samples.		Lots.		Counts.	
	1st November 1933 to 31st May 1934.	1st November 1932 to 31st May 1933.	1st November 1933 to 31st May 1934.	1st November 1932 to 31st May 1933.	1st November 1933 to 31st May 1934.	1st November 1932 to 31st May 1933.
Bombay ..	70	66	70	66	12	201
Punjab ..	8	39	8	39	24	117
United Provinces ..	6	7	6	7	18	22
Madras ..	44	28	44	28	133	85
Central Provinces ..	9	5	9	5	27	15
Miscellaneous ..	68	36	68	36	207	111
Total ..	205	181	205	181	621	551
Standard tests ..	15	17	30	34	168	188
Trade tests ..	32	25	32	25	88	66
Technological tests.	87	46	90	50	249	88
Grand Total ..	339	269	357	290	1,126	893

The Spinning Laboratory, during this seven months' period under notice, has tested nearly 25 per cent. more samples and lots than were tested during the corresponding period of last year. This large increase has been possible of attainment largely through the recent introduction of the new Fine Roving Frame working in conjunction with No. 3 Ring Frame; and comprises, for the most part, spinnings of the ginning test samples.

Yarn Testing Section.—This section has been very fully occupied making the necessary tests on the yarns spun in the Laboratory, and has, during the seven months' period, completed tests on 300 samples which include determination for the count, strength and twist of each yarn. The results of some of these tests are included in the Technological Circulars listed at Table on page 79 and others are incorporated in the many spinning test reports noted at Table III, which are issued to the various agricultural officers concerned.—

TABLE III.

	1st November 1933 to 31st May 1934.	1st November 1932 to 31st May 1933.
Spinning Test Reports	59	50
Fibre ,, ,, ...	6	15
Yarn ,, ,, ...	1	3
Total ..	66	68

Table III comprises the number of reports issued during the present period and comparative figures for the same period of last year. Each of the 59 spinning test reports include the results of a combined spinning and fibre test and the six fibre test reports issued detail the results of only the fibre tests.

In addition to the reports issued to the many agricultural officers concerned not a few of the samples listed at Statement A above forms the material for tests of a special nature. These special tests are outlined below in the following four broadly classified groups :—

I. *Agricultural samples*—

(*i*) Irrigation experiments.
(*ii*) Rotation experiments.
(*iii*) Manurial experiments.
(*iv*) Bukalasa cotton tests.
(*v*) Standard Indian cottons.

II. *Fibre tests*—

(*i*) African cottons.
(*ii*) Dokras cotton.

III. *Trade Tests*—

(*i*) Millowners' and E. I. C. Association samples.
(*ii*) Dry and Damped cotton.
(*iii*) Deterioration of Broach cotton stored at Bombay.
(*iv*) Deterioration of stored cotton at Karachi.
(*v*) Effect of compression in baled cotton.
(*vi*) Storage effect on fibre quality.
(*vii*) Storage effect on *kapas* before ginning.
(*viii*) Deterioration of Broach cotton due to damping.
(*ix*) Cloth samples.
(*x*) Sized yarn samples.

IV. *Technological samples*—

(*i*) Experiments on the carding engine.
(*ii*) Ginning experiments.
(*iii*) Wax content and feel of cotton.

I. Agricultural samples.

(*i*) *Irrigation experiments.*—The samples received from Bikaner, Sakrand and Coimbatore for this investigation were tested during the present period. The results are tentatively summarised as follows :—

Bikaner.—Frequent and heavy irrigation resulted in better yield, higher ginning percentage and stronger yarns but the differences are not large.

Sakrand.—Regular irrigations gave slightly longer fibres; 10 irrigations, as compared with 7, gave less immature fibres, less loss in processing the cotton and stronger yarns with fewer yarn breakages.

Coimbatore.—Different spacings and irrigations are considered conjointly. Compared with the dry sample irrigation results in an increased yield of seed cotton, reduction in number of immature hairs and neppiness of yarns but shows no change in fibre length or fibre weight.

(*ii*) *Rotation experiments.*—In order to ascertain which rotation gave the best results the Cotton Specialist, Coimbatore, sent six samples for test which had been grown after cumbu, cholam, ragi, groundnut, fallow and green manure respectively. Considering both yield and spinning performance the green manure sample gave the best results with groundnut and fallow following next in order. A similar experiment was made by the Superintendent, Agricultural Research Station, Koilpatti, on five samples of Karunganni C7 which were grown after irangu, cumbu, pillipasara, set seed and "shot blade" respectively. Previous tests had indicated that irangu lowered the spinning performance but the present test reveals no significant difference with the exception of the sample after pillipasara, which gave a longer fibre but slightly less even yarn. The other samples show no difference among themselves and all are slightly inferior to the control sample.

(*iii*) *Manurial experiments.*—As mentioned in the Director's last progress report, a paper on the effect of manurial treatment on Cambodia Co. 1 cotton to investigate the type of manure and the amount of dressing to give the best results of yield and spinning performance with Cambodia was completed and read before the Indian Science Congress held in Bombay in January 1934. Another manurial test, noted in progress report No. 20, has been completed during the present period on Karunganni C7. Two different manures were applied in this case and both gave stronger yarns than the control sample. There was little to choose between the results of the two manured samples and the results of this test confirm those of the previous tests.

(*iv*) *Bukalasa cottons.*—Spinning and fibre tests were recently carried out on eight cottons submitted by the Agricultural Officer of the Bukalasa Experimental Stations, Uganda. This is the second year in succession that the Committee have permitted tests to be made on these cottons.

(*v*) *Standard Indian Cottons.*—The test for maturity of fibres of the Standard cottons is a new feature introduced for the first time this season and is one that is likely to become very popular as undoubtedly the number of mature hairs present in any given sample is an important factor in the strength of the spun yarn. The maturity count will be included in the forthcoming annual bulletin on the Standard cottons. As the two Standard cottons CA9 and Hagari 25 have gone out of cultivation these cottons will be omitted from this season's bulletin. The Hagari 25 has been replaced by Hagari I.

II. Fibre Tests.

(*i*) *African cottons.*—Tests for mean fibre length has recently been made at the Laboratory on three African cottons namely, Kampala, Busoga and Jinja. These tests supplement those already carried out during the past three seasons and are intended to assist the Special Appeal Committee of the East India Cotton Association in fixing a minimum standard of fibre length for these cottons. At their meeting held on the 22nd March 1934 the Special Appeal Committee considered the report of Dr. Ahmad on the fibre length tests already made at the Laboratory on these three African cottons and decided it would be advisable to continue these tests for another season before a minimum standard of mean length could be safely recommended; and with this object in view invited the Bombay Millowners' Association to assist by sending to the Appeal Committee every month three or four samples of these African cottons of fair average quality of the season.

(*ii*) *Dokras Cotton.*—Mr. M. R. Dokras, a Pleader residing at Chandur, sent a sample of cotton (recently evolved by him and bearing his own name) to the Laboratory to be tested and its results to be compared with those of the standard Verum cotton. This particular sample of Dokras was found to be about 15 per cent. both longer and finer than the standard Verum 262.

III. Trade Tests.

(*i*) *Trade samples.*—The East India Cotton Association and the Millowners' Associations of Bombay and Ahmedabad have in accordance with the arrangement made in September 1929 continued to send samples representative of the season's commercial types; and, during the period under review, have sent 20 such samples. These samples have, as usual, been subjected to the spinning test only and the results were incorporated in the respective circulars. A list of these Technological circulars issued during the past seven months is given below :—

Cotton.	Technological Circular No.	Date of issue.
Umri Bani	110	December 1933.
Verum 262 (Akola)	111	January 1934.
Khandesh (Bengals)	112	February 1934.
Ujjain	113	" "
Punjab-American 289-F	114	" "
Verum 262 (Nagpur)	115	" "
C. P. No. 1 and Berar	116	" "
Khandesh	117	" "
Ujjain (Mandsaur)	118	" "
Moglai	119	" "
Punjab-American 4-F	120	March "
Muttia	121	" "
Latur and Nanded	122	" "
Hubli-Kumpta	123	April "
Hubli-Upland	..	....

Cotton.	Technological Circular No.	Date of issue.
Broach	124	April 1934
Surat	..	....
Punjab-American	125	April 1934
Westerns	126	May „
Miraj	..	....
Surat 1027 A.L.F.	127	May 1934
Hagari I	128	„ „
Cambodia Co. 2	129	„ „
Gadag I (Dharwar-American)	130	„ „
Surat	..	....
Tiruppur Cambodia	131	May 1934
Farm Westerns	132	„ „
Kumpta	133	„ „
Jagadia	134	„ „

(*ii*) *Dry and damped cotton.*—The third set of samples connected with this investigation was recently drawn from the three Amraoti bales kindly placed for the purpose at the disposal of the Laboratory by Messrs. Volkart Bros. Spinning tests were carried out on lines similar to those made in the first two sets of samples. Fibre tests on the cotton and tests on the spun yarns on this third set of samples are now being made. The fourth and last lot of samples will be drawn and tested in a similar manner after the lapse of a suitable period and the results will finally be written up by the Director on his return from leave.

(*iii*) *Deterioration of Broach cotton.*—The Board of the East India Cotton Association approved of the recommendation of their Moisture Tests Committee that, having regard to the general view of the Trade that Broach cotton tends to deteriorate more rapidly than other types of Indian cotton, the Technological Laboratory should be invited to investigate this problem and ascertain the cause (s) responsible for this noted deterioration of Broach cotton. The Laboratory accordingly purchased one bale of Broach (Palej) cotton. The first of the series of tests have recently been carried out comprising fibre and spinning tests. Further samples will be drawn from the bale at intervals of six months each and similar tests will be made. It will then be possible to decide if any deterioration has taken place in the grade and strength of this particular cotton.

(*iv*) *Deterioration of cotton stored at Karachi.*—In accordance with the arrangement mentioned in the Director's progress report No. 20 a third set of six samples was drawn from six of these bales three of which are stored in open plinths and three in a godown at Karachi. One of the Junior Testers from the Laboratory proceeded to Karachi in April and drew the samples. Spinning and fibre tests were made on these samples on exactly similar lines as on the previous occasion after they had been valued by the Special Appeal Committee of the East India Cotton Association. A fourth and last test on similar lines is to be made in October after which it will be possible for the Director to summarise the results of the four experiments.

(*v*) *Effect of compression in baled cotton.*—The high degree of density to which cotton is pressed in baling was considered as a possible cause of the observed neppiness of 289-F cotton. The Committee at their last meeting in January approved that an investigation of this problem should be accordingly undertaken. For this purpose three bales of 289-F were specially prepared; and the scope of the experiment was extended by including three bales similarly prepared at Amraoti from Berar cotton. Each cotton was pressed into three bales of the *same* size but in which the weight of cotton differed being 400 lbs., 300 lbs., and 250 lbs. respectively. Initial samples drawn from these six bales have been subjected to the spinning and fibre tests and it is proposed to repeat this procedure after a lapse of four months.

(*vi*) *Storage effect on fibre quality.*—Rao Bahadur Tharumal Bilaram, a member of the Sind Cotton Committee, submitted 10 samples of cotton to the Laboratory with a view to investigate the phenomenon of the heating of seed cotton when openly stored in bulk such being the prevailing practice in certain areas of Sind. He believes that the fibre deteriorates in quality and also that the germinating power of the seeds are affected.

The Director, Dr. Ahmad, communicated with the Chief Agricultural Officer in Sind in this connection; and, as a preliminary, ordered a summary of the most important results so far obtained by other workers to be prepared; and the matter now awaits disposal by the Director on his return.

(*vii*) *Deterioration of Broach cotton due to damping.*—The Technological Research Sub-Committee accepted the recommendation of the Moisture Tests Committee of the East India Cotton Association that an investigation should be undertaken by the Laboratory to determine to what extent, if any, Broach cotton deteriorates whilst in storage as a result of damping the cotton before pressing it into bale form. Accordingly, four bales of Broach cotton were kindly supplied by the East India Cotton Association from the pressing factory of Messrs. Narandas Rajaram & Co. at Palej. These bales were prepared under the supervision of one of the Junior Testers sent from the Laboratory. One bale was pressed dry. The cotton for the other three bales was irrigated with 4 lbs. of water for one bale; 8 lbs. of water for the second bale; and 12 lbs. for the third bale. Spinning and fibre tests have already been made on 12 lb. samples of each of the four lots and further samples will be drawn from the three bales and similar tests made after a lapse of four months: and this procedure will be repeated again twice at intervals of four months each. Unlike the Amraoti bales mentioned at (*ii*) above the amount of water added to these Broach bales was known and determined beforehand.

IV. Technological Samples.

(*i*) *Experiments on carding engine.*—The progress made in this problem has been noted by the Director, from time to time, in his progress reports. The work has, so far, extended over a period of three years and has been made as comprehensible as possible. Each test was made on a 10 lb. sample; and, in all, three bales have been utilised, namely, one bale each of Kampala, Coompta and C. P. No. 1. And thus the tests cover a wide range of yarn counts and cotton of vastly different character. Certain features connected with these tests are noted in the Physics Section below.

(*ii*) *Ginning tests.*—Recently the Cotton Research Botanist, Lyallpur, ginned *kapas* of Mollisoni, 4F, 289-F and Early Strain on the saw and roller gin and sent the 8 lots of lint to the Laboratory to be tested. With the exception of Mollisoni the saw ginned samples yielded stronger yarns. He also sent samples of these same *kapas* to be ginned and tested in the Laboratory as a parallel series. The Lyallpur ginned samples of Mollisoni and 4F gave slightly stronger yarns than the same samples ginned in the Laboratory. But the 289F and Early Strain were decidedly much inferior, especially the Early Strain. Two samples of Gaorani *kapas* were also ginned in the Laboratory on the saw and the roller gin. The four lots of lint have been spun and the yarns now await to be tested.

(*iii*) *Wax content and feel of a cotton.*—The results of this investigation were embodied in Bulletin Series B, No. 18. This Bulletin was issued during the period under review and a brief summary of its contents is given below in the Publication Section.

II. Research Laboratory.

Fibre Testing Section.—This section has been very fully occupied during the present period and has completed tests on 224 different samples. The staff of this section have also prepared exhibits for the India House in London consisting of 21 Baer Sorter specimens of the present season's Standard Indian Cottons and also 8 halo specimens of combed seeds selected from these cottons.

Physics Section.—Mr. Hari Rao has made good progress with his own particular problem which deals with the effect of the "Variation in the strength of cotton fibres with twist"—each fibre so tested is subjected to different degree of axial twist and its resultant strength noted with each degree of twist. He has so far completed tests on Co. 2, Verum, Mollisoni and A19 partially; and tests on Banilla and Hagari will be undertaken in due course.

Mr. D. F. Kapadia.—The general problem of the effect of "Different carding engine organisations on the quality of the resulting yarns" was begun in June 1931 by Mr. Kapadia and the undersigned jointly and the last test of the series was completed recently. Since then Mr. Kapadia has been engaged in making the necessary yarn tests and calculations thereon. He has analysed the results of all the tests obtained and is now writing up a preliminary report. The following salient figures afford some idea of the magnitude of the problem. 160 different carding engine organisations were employed using three cottons of widely different quality and from which 320 separate spinnings were made. 32,600 Lea and Pull tests and 32,600 Ballistic tests were made on these yarns for strength together with 64,000 determinations for count. Besides this, 649 determinations of fibre distribution and fibre weight were made on the sliver, flat waste and licker in fly.

Mr. R. S. Koshal has continued his part time study of the phenomenon of "fluorescence of the Standard Indian Cottons when subjected to the rays of ultra-violet light." Side by side with this investigation he has also recently undertaken a study of "the effect of weather on the quality of the Standard Indian Cottons"; and, for this purpose, all the agricultural officers concerned have been invited to kindly furnish the Laboratory with records of rainfall and temperature that has prevailed on their respective farms, from where the cottons were received, during the past ten seasons.

Mr. C. Nanjundayya is now writing an account of his recent investigation of the "Relationship between fibre strength and length-grade of cotton fibres" with a view to its publication in due course. Of the two problems mentioned in the last progress report, viz., "The absorption of moisture by cotton under different degrees of compression" and "The rate of absorption of moisture by different Indian varieties", Mr. Nanjundayya has so far completed his examination of two cottons in the loose state.

Dr. R. N. Mathur before relinquishing his post, the term of which ended on 16th May 1934, submitted a brief account of the results of his "measurements of ribbon width" of five Standard Indian Cottons and also a short account of his "measurements of fibre density" made on 12 of these Standard Cottons and one Sea Island Cotton.

Chemistry Section.—Mr. D. L. Sen has continued his work on the "absorption of substantive dyes by the Standard Indian Cottons" of the last season. He is, at present, determining the wax content of the same cottons in order to find out the co-relation, if any, between the amount of dye absorbed by these cottons and their respective wax content. Furthermore, he has carried out the determination of three strains of Surat cottons as requested by the Cotton Breeder, Surat. Recently Mr. Sen has completed the work on the "Effect of manurial treatment on the yield, fibre properties and spinning values of cotton." This work will be published in due course, in the form of a bulletin. In addition, Mr. Sen has been engaged in the Moisture Testing Section at Sewri. Since November 1st, 1933, he has completed tests on 49 samples, a summary of which will be found under "Moisture Testing Section."

Microscopy Section.—In the last progress report the Director noted the importance attached by Cotton Breeders to the "maturity of fibre" test; and much of Mr. Gulati's time during the present period has been taken up in making maturity tests on certain agricultural samples besides maturity with fibre strength tests on the current season's Standard Indian Cottons. The forthcoming annual bulletin on the Standard Indian Cottons will include this feature of fibre maturity for the first time. Mr. Gulati is also investigating the percentage of mature fibres in various cottons at progressive stages of their preparation for spinning. Side by side with these investigations on fibre maturity he is making observations on the "growth of hairs and multiplication of epidermal cells on the surface of developing cotton seeds."

III. Moisture Testing Section.

The Moisture Tests Sub-Committee of the East India Cotton Association met on the 20th March 1934 and Mr. D. L. Sen the Officer-in-charge of this Section at Sewri was present by special invitation. The meeting considered Dr. Ahmad's latest report which dealt with the moisture tests made between January and June 1933. The meeting ultimately decided that the data available was not sufficient to warrant a definite judgment being formed; and that, therefore, tests should be continued for another year, and that cottons from the United Provinces, Sind, Kathiawar and Africa should be included in the scope of the tests.

The following summary table indicates the number and type of samples tested by Mr. Sen at Sewri during the present period :—

December 1933 *to May* 1934.

Appeal Committee	3	samples.
Trade (Indian)	27	,,
,, (Egyptian)	6	,,
,, (African)	5	,,
Special Experimental bales ..	8	,,
Total ..	49	samples.

This Section has up-to-date conducted moisture tests on 625 samples in all since its inception.

IV. Publications.

The following is the list of the Technological Bulletins and Circulars issued during the period under review :—

Bulletins.—(1) Technological Bulletin, Series B, No. 18, "A Note on the Wax Content of Indian Cottons with special reference to their feel" by Nazir Ahmad, M.Sc., Ph.D., and D. L. Sen, M.Sc. (Tech.), A.I.C.

The following three papers were read before the Indian Science Congress held in Bombay on the 2nd January 1934 by the respective authors :—

(1) "Effect of Manurial Treatment on the yield, fibre properties and spinning value of cotton" by Nazir Ahmad, M.Sc., Ph.D., and D. L. Sen, M.Sc. (Tech.), A.I.C.

(2) "The Application of Modern Methods of Field Experiments for improving the yield and quality of Agricultural Produce", by R. S. Koshal, M.Sc.

(3) "New Method for the Determination of the Mean Fibre-length and the Fibre-Weight per inch of cotton" by Nazir Ahmad, M.Sc., Ph.D., and C. Nanjundayya, M.Sc.

Technological Circulars.—Technological Circulars Nos. 110-134 as given on page 79.

During this present period the undersigned re-wrote the initial draft of the bulletin to be published on the "Combing of good quality Indian Cottons" and has also written out the initial draft for the bulletin on "Settings and Twists in Fly Frames." These two problems were mentioned in the Director's Progress Report No. 19.

V. General.

Visitors.—Sir Richard Jackson visited the Laboratory on 12th March 1934 in the company of Mr. R. Fleming. Mr. Fleming has, one regrets to note, since then passed away. During their visit they suggested that all the Technological Circulars issued on Trade cottons, and which are listed at Table on page 79 above, may be combined at the end of the season and issued as a single bulletin on lines similar to those adopted with the Standard Indian Cottons. This suggestion was conveyed to the Secretary as also the further one made by them that each trade cotton incorporated in these circulars could with advantage be valued each year under the same contract. The East India Cotton Association have very kindly promised that this suggested procedure will be adopted in the future.

Equipment—(*i*) *Blow-room Machinery.*—In accordance with the decision of the Standing Finance Sub-Committee at its meeting held on 17th March 1934 the order for the new extra machinery necessary to bring the existing blow-room plant more up-to-date has been placed with Messrs. Tweedales and Smalley, Castleton, through their Bombay Agents and delivery of the new machinery may be expected about the end of September.

(*ii*) *Testing apparatus.*—A new Baer's 5 Spindle wrap reel has been added to the Yarn Testing Section and is giving satisfactory service.

(*iii*) *Calculating Machine.*—Since the 10th February 1934 a new method of calculating and recording the various yarn test results has been in force in the Yarn Testing Section. In the new method each Junior Tester is relieved of the duty of having to calculate the average of each set of results obtained. One of the Laboratory Statistical Clerks deputed for the purpose now takes over the recorded results from each Tester and, by means of the newly acquired Munroe Calculating Machine, automatically obtains a determination of average count, strength, etc. for each set of results. This new technique has enabled each Yarn Tester to make something like 30 per cent. more tests during the present period.

Stapling Apparatus.—Messrs. Remfry & Son, Calcutta, the accredited Patent Agents of the Committee, in this matter have obtained the patent rights of the apparatus in India and also in Ceylon and have forwarded applications for similar rights in the following countries, namely, United Kingdom, France, Germany, South Africa, Canada, Australia, New Zealand, United States of America and Irish Free State, and the intimation of acceptance by each country may be received at an early date.

One Barnstead's Automatic Distilling Apparatus was obtained for the Chemistry Section.

Staff.—The Director of the Laboratory, Dr. Nazir Ahmad, proceeded on four months and 23 days' leave out of India on the 13th March 1934 and the undersigned as Officiating Director took over charge of the Laboratory on that date.

Mr. A. B. Khan, who had previously been trained and employed temporarily in the Laboratory as a Junior Tester, was appointed on 4th April 1934 on three months' probation to the post of a permanent Junior Tester recently sanctioned by the Committee.

The term of service of Dr. R. N. Mathur who had been employed in the Laboratory as Temporary Research Assistant ended on the 16th May 1934.

During this period, the second batch of student-trainees completed on 30th April 1934 their course of study-instruction. Mr. L. Trilokanath Sharma spent two months each in the Fibre, Yarn and Spinning Sections in the order named whilst Mr. Syed Abdulla confined his attention exclusively to the methods employed in the Fibre Testing Section.

ACKNOWLEDGMENTS.

I wish to tender thanks, on behalf of the Director and myself, to the Cotton Graders who have continued to materially assist the Laboratory by valuing the many cottons sent to them and issuing their valuable reports thereon; and also to each member of the Laboratory staff whose collective work during this seven months' period forms the subject-matter of the present Progress Report.

Dated the 13th June 1934.

(Signed) R. P. Richardson,
Officiating Director,
Technological Laboratory.

APPENDIX VI.

SUBJECT 70.—*Report of the Agricultural Research Sub-Committee.*

A. REPORT OF THE AGRICULTURAL RESEARCH SUB-COMMITTEE ON PROGRESS REPORTS AND PROGRAMMES OF WORK.

The Sub-Committee considered and approved the following progress reports on schemes and the respective programmes of work for 1934–35 subject to the remarks, if any, made against each :—

(1) *Agricultural Research Schemes.*

Surat Boll-worm Clean-up Scheme (*No.* 26).—As the clean-up campaign of 1932-33 season was quite a success, the period under report was devoted to making observations on the crop of 1933-34 season of the effect of the clean-up. The area chosen for the campaign was, prior to this organised course of action in 1931, more severely infested by boll-worms than the neighbouring areas, and has since improved from season to season, so much so that during 1933-34 the infestation was markedly low, the stand of the crop being good and the plants being tall and prolific. Night-caging observations have definitely shown that the incidence of the pest was less in the cleaned-up area than outside it.

The Sub-Committee desires to invite attention to paragraph 10 of the Deputy Director of Agriculture, Gujerat's letter No. C. 14/2801, dated the 28th May 1934. If 10 per cent. of the cotton-growers fail to adopt the measures which have now been so thoroughly demonstrated, they will defeat the scheme and those cotton-growers, who are now uprooting stumps, will soon get discouraged. The Sub-Committee considers that it should now be brought to the notice of the Government of Bombay that they must be prepared either to provide a considerable sum of money for propaganda and for suitable administrative action to secure the continuance of these successful control measures or to introduce legislation making the adoption of them compulsory.

The outturn too was, in spite of two spells of cold weather, 25 per cent. more than that of the previous season when almost record yields were obtained.

Although reliable data regarding yields could not be obtained, the Sub-Committee considers that a quantitative record of the actual increases in yield due to control measures will be essential to further progress and that an attempt should be made to get this information during the 1935 picking season. The cost of the necessary arrangements could be met from the very substantial savings on the scheme which, it is observed, the Director proposes to devote to the purchase of stump pullers.

Broach Cotton Breeding Scheme (*No.* 27).—This scheme has now reported on its second year's work. Efforts are being made to combine by hybridisation the high ginning qualities of Goghari and a Viramgam strain with the other required qualities of the Broach *desi* strain, B.D. 8.

Jalgaon Cotton Breeding Scheme (*No.* 28).—The isolation of wilt-resistant strains possessing also commercially important qualities was in progress, and three promising strains of *neglectum* have been selected for rigid yield trials during the next season.

Bombay Scheme for the survey of small leaf disease in cotton (*No.* 29).—This is a one year scheme which started work in November last. It is said that the severity of this disease varies from year to year, and the last season was one of less severity. The report shows that the disease is of widespread occurrence and affects all cottons except exotics. The symptoms of the disease are described in the report, and it is said that the disease is not caused by any parasitic organisms.

Sind Physiological Research Scheme (*No.* 30).—The report deals with the work done during the seventh year of the scheme, and shows that the cotton plant requires more water during the flowering and fruiting period than in the early part of its growth. Eight inches of water during the first 28 days followed in succession by two waterings of 3″ each at 20 days' interval, then at 15 days' interval and five waterings of 3″ each at 10 days' interval have given the best yield. The other main item of work was the study of the effect of application of ammonium sulphate at different growth periods on the yield of cotton. The results obtained were not however significant. Observations on the "red-leaf" disease were continued.

In view of certain comments which have recently been made regarding schemes extending in directions not originally contemplated, the Sub-Committee desires to observe that much of the work described in this report is not, strictly speaking, physiological research but agricultural field experiments on differential irrigation, manuring, etc., which form a normal part of the work of a cotton research station. These experiments are necessary and useful and the point is only raised here to prevent future misunderstandings.

As regards the future programme of work, the Sub-Committee desires to make the following observations :—

Item 3(*b*) is not a very promising line of work and the item is vaguely described. Red Leaf is due to a variety of causes and there is possibility of a considerable waste of time in the biochemical experiments proposed. Before starting work on this item, it is suggested that the newly appointed Physiologist in the Punjab should be consulted.

Items 3(*a*) *and* (*c*) are accepted by the Sub-Committee on the understanding that what is here intended are observations on the cottons grown in the irrigation, manurial and varietal experiments; it is assumed that it is not intended to lay down special field experiments for these observations.

Item (5)—*Control of White Ants.*—The results contained in the progress report do not seem to indicate that this is a very promising line of work. But it is presumed that these experiments have already been started so far as the 1934–35 season is concerned.

Madras Herbaceum Scheme (*No.* 31).—This scheme has now completed its eleventh year. It was started in 1923 with the object of securing pure strains from local Uppam equal to Karunganni in yield and spinning quality. When this object proved a failure, the scheme was further extended in 1930 for the purpose of obtaining hybrid strains having the characters originally aimed at. The report shows that no tangible results have yet been obtained.

The Sub-Committee is definitely of the opinion that the production of F_4 seed in sufficient quantity for commerical use is not a practical proposition.

In view of the fact that the hybrid material at present has only reached F_4, and the scheme is only sanctioned until May 1935, it is recommended that the Secretary and Mr. Hutchinson be asked to visit Coimbatore and make recommendations regarding the future of the scheme, if possible before the cold weather meeting.

Madras Fodder Cholam Scheme (*No.* 32).—The progress report is for the fourth year and shows that during the year it has been conclusively proved that the ill-effects of cholam on the succeeding cotton crop are not dependent upon the quantity of stubbles left in the soil, nor due to its heavy crop of fodder. It was also found that though manuring with ammonium sulphate increased the fodder obtained by cutting cholam at the shot blade stage, the quantity of fodder was still less than what could be obtained by allowing cholam to set seed. Moreover, manuring hastens ear production, which is not desirable.

Madras Pempheres and Physiological Research Scheme (*No.* 33).—As the Physiologist has not yet returned from training in England, the investigations during the year were as before confined to the study of the stem-borer. The results of an experiment designed to gauge the damage caused by the stem-borer show that except for the lodging of the plant that might be caused by a weakened stem through the attack of the pest, the loss in yield was not significant. As the pest has been observed to continue to emerge from pulled out cotton stalks for a period of two months and manage to live on other host

plants till the next cotton season, it is suggested in the report, that an effective method of exterminating the pest lay in extending the Pest Act to other cottons as well besides Cambodia, and to advise the *ryot* to expose the stalks to the direct rays of the sun for ten days prior to their stacking.

It seems obvious, therefore, that the control of Pempheres can be attained by these methods and that for this purpose further work on the bio-chemistry of cotton is not called for. Of the actual programme, item (1) is by no means promising as the search for tolerant types so far has not been successful.

Item (2) is unobjectionable, if the scheme is continued at all.

Item (3) does not seem at all practicable in view of the fact that Pempheres is absent from the greater part of the cotton growing tracts in India.

Item (4) is practical but does not call for a special research staff.

Item (5) cannot be carried out because no such strains have yet been obtained.

Item (6) does not seem to be of practical importance as the experiments already carried out show that there is not much chance of success on a practical scale.

Item (7) has already been worked on to a considerable extent and it is doubtful whether further work will enable the conclusions already reached to be greatly enlarged.

Item (8) would be of purely academic interest and seems unnecessary in view of the work already done elsewhere.

It was reserved for this meeting of the Committee to decide whether this scheme should be continued any longer. In the opinion of the Sub-Committee the Bio-chemical work should now be terminated.

Madras Nadam Cotton Breeding Scheme (*No.* 34).—The report is for its first year of work. It was noted during the year that in Cambodia fields adjoining Nadam cottons the mortality due to the stem-weevil was 25 per cent. as against 1 per cent. in fields far away from Nadam cottons. As a type or types of cotton which could be sown and cropped at the same time as Cambodia have first to be selected, work during the year was directed to sowing trials in July and September.

It is suggested that the Secretary and Mr. Hutchinson should visit the scheme and discuss plans with Mr. Ramanathan when visiting the Herbaceum Scheme.

Punjab Botanical Research Scheme (*No.* 35).—This scheme has just completed its ninth year of life. The jassid-resistant early strain pure line families bred true to extra hairiness and were found to be free from jassid attack.

The Sub-Committee noted with satisfaction that three useful strains of American cotton had been evolved as a result of this research and that one of these (N.T. 36-F) is of unusual promise. Five more new strains of American and one of *desi* have been finally selected during the year under report for field tests. One of these, N.T. 45, has already been found to be very promising in varietal tests. The results of ridge-sowing experiments of the last seven years show that this method is in no way advantageous.

Punjab Pink and Spotted Boll-worm Scheme (*No.* 36).—*Items* (1) to (4) of the progress report record an elaboration of details which have previously been reported all of which bear on the problem as to why the incidence of Pink Boll-worm is so different in different parts of the Punjab.

Item (5) is an important portion of the scheme and the Sub-Committee considers that the actual results obtained from the 40 stations should have been reported and suggests that these be submitted to the next meeting of the Agricultural Research Sub-Committee.

Programme of work for 1934–35.—*Item* (*i*) was approved subject to the alteration of the description to study the *incidence* of the Spotted and Pink Boll-worm in different tracts of the province.

Item (*ii*).—The Sub-Committee considers that this item of work would be of academic interest only and that it should not be undertaken.

In regard to the proposal for further observations on Pink Boll-worm, the Committee considers that those already recorded are adequate.

Item (*iii*) is approved, it being understood that this means observations and counts on the cottons growing in the Cotton Research Botanist's Section.

The Sub-Committee has no comments to make on item (*iv*). As regards item (*v*), this has already been done for Pink Boll-worm both in the Punjab and the United Provinces and work on Spotted Boll-worm mainly seems to be required.

Item (vi).—The Sub-Committee agrees as to the importance of observations on the frequency of distribution of parasites and some work on the life cycle of those not previously worked out would probably be necessary. It does not consider that methods of breeding parasites on a large scale could be successfully taken up as an item of this scheme; this requires special equipment and specially trained staff.

Punjab Cotton White Fly Scheme (No. 37).—This scheme, which has now completed its third year, has two more years to run. The report shows that the pest lives on cotton from May to September, on cultivated winter crops from October to February, and on cucurbits, melons and ratoon cotton from March to May. The irrigation experiments show that with increasing water supply the attack of the pest becomes less. As to control measures, a single spraying in July when the pest was severe was more effective than one in August when it had declined and gave an increased yield of two maunds per acre.

Method of determining comparative infestation described on page 2 of the progress report. It does not appear to the Sub-Committee to be the best possible. It would be better to take about 100 leaves at random throughout each plot. Results from one or two parts are not likely to give reliable figures. The figures for the range of variation in the pH of different leaves indicate that this is not worth continuing.

Item 1 on page 4 appears to the Sub-Committee to be too academic; the second item is more important. The experiments carried out in caged plants are on too small a scale and a much larger number of plants is necessary in order to obtain reliable results. The table on page 6 does not show the effect of White Fly infestation on the yield of *kapas* which is the important point.

Programme of work in 1934–35.—The Sub-Committee considers that item 1 (1) should be omitted as too academic. In item 1 (2) it would be better to determine the effect of differential irrigation on infestation and yield of cotton.

Item 1 (3) again seems to be largely of theoretical interest.

Item (iv) would be improved by the addition of a potash manure to the series.

Item (v) does not appear to be very practical as most of the soils in the Punjab are neutral or inclined to alkalinity and the proposed nitrogen study if properly done would be much extensive.

Item (ix) in the opinion of the Sub-Committee is quite outside the scheme and should be omitted.

Item (x) does not seem to be calculated to yield any definite information since, as described, it would not determine the effect of parasites.

Item (xi) It is doubtful whether any further experiments are necessary or practicable.

Item (xiii), in the opinion of the Sub-Committee, is entirely outside the scope of the scheme and should be omitted.

Punjab Spraying Trials Scheme (No. 38).—This is only an interim report. Three different kinds of sprayers, *viz.*, the Sapom Sprayer, the Hardie Power Sprayer, and the Orchard Power Sprayer were tried. The insecticides used were rosin compound, rosin soap, calcium cyanide and nicotine sulphate. Though the last mentioned sprayer proved the most effective in destroying the pest, it was found to be very expensive. The Sapom Sprayer working with one nozzle per row of cotton could destroy just over 70 per cent. of the pest at a cost of Rs. 1-5-4 per acre, against Rs. 1-9-5 with Hardie Sprayer which killed over 83 per cent. of the pest.

The Sub-Committee notes that the actual yields on sprayed and unsprayed plots have *not* been stated. The Sub-Committee desires to emphasise the need for full details of the yields in the next report. Individual yields should be shown in order that their statistical significance may be ascertained.

Punjab Root Rot Scheme (No. 39).—The Sub-Committee note that as a result of the investigation, two species of *Rhizoctonia* are regarded as primarily responsible for the disease, but that the vigour of attack is increased when certain other organisms are associated with these two species of *Rhizoctonia*. As the scheme has only one more year to run, the Sub-Committee suggest:—

(*a*) that these results should be confirmed,

(*b*) that attention should be concentrated on—

(*i*) determining whether any soil treatment reduces *Rhizoctonia* attack,

(*ii*) determining whether *Rhizoctonia*-resistant strains of cotton exist.

This means a considerable reduction of the proposed programme which is regarded as too diffuse. Items 8, 9, 10, 11 and 12 might, with advantage, the omitted.

Punjab Defibrating and Delinting Scheme (*No.* 40).—The machines were received only recently and such tests as have been done are not considered to be of any value.

Central Provinces Botanial Scheme (*No.* 41).—Late Verum and V. 434 were subjected to severe field tests during the year under report. Late Verum spins up to 34's and is also the best yielder of all new strains. It is expected to cover an area of about 16,000 acres in the current season. V. 434 is next to Late Verum in yield and spins up to 32's. About 2,000 acres are expected to be sown to this strain during the current season.

Work on Bani E.B. 31 and Bani 306 was continued.

A few high yielding white linted strains have also been isolated from Chanda Jari and after further testing, the best of them will be retained for multiplication. A few promising strains of Buri (*Gossypium hirsutum*) also have been selected and attention is being paid to remedy the defect of weak staple.

United Provinces Entomological Scheme (*No.* 42).—The Director of Agriculture states that he expects this report to be ready in time for the next meeting of the Committee. The United Provinces Government are now considering the proposals for actual control measures, financed in part by a cess, proposed by the Committee which they appointed to consider the results obtained. They have asked the Committee to assist them in preparing public opinion for the neeessary legislation by the loan of the Publicity Officer. The Director of Agriculture explained that the Publicity Officer would be required for a fortnight in early September and a fortnight in early October to obtain first hand information as to the way in which the control measures are working in the present demonstration areas and for a period of about three months during the cold weather to tour there in the cotton-growing tracts and to carry on propaganda. The Sub-Committee wishes to commend this proposal to the careful consideration of the Central Cotton Committee without committing itself in any way in regard to its attitude towards the proposed Pink Boll-worm Extension Scheme.

Scheme for survey of cottons in Rohilkhand and Bundelkhand, United Provinces (*No.* 43).—The report shows that 1,852 villages out of a total of 2,791, cotton growing villages in Budaun, Bareilly and Naini Tal districts and Rampur State were covered during the year and over 5,000 samples of cotton were collected and critically examined. A particular type of new plant having the external characters of *G. neglectum roseum* with better fibre length was noticed throughout the area surveyed and it will be examined for its purity.

Institute of Plant Industry, Indore (*No.* 44).—To speed up genetic and plant breeding work on cotton by growing two generations a year a small green house has been erected at the Institute. A considerable quantity of new researeh equipment has also been added. Two strains of Malvi cotton have been finally selected as suitable for distribution in the Malwa tract. As for the Nimar tract selections have been made from *desi* and "Malan" cottons to be tried during the ensuing year. A botanical survey of the cotton crops of Malwa and Nimar tracts shows that the ratios between Malvi and *roseum* types in these tracts are as 6 to 1 and 2 to 7 respectively.

Hyderabad Botanical Research Scheme (*No.* 45).—During the year under report seven pure strains were compared with local mixture Gaorani Umri. Three of these, which are superior to local mixing in fibre length and ginning outturn, were also found to be definitely superior to it in yield.

In another set of varietal tests only Havri-3 proved better yielding than the control (Aurangabad Local). There were also two other comparative tests of other strains to select the most suitable strains for the Gaorani and the non-Gaorani areas.

186 pure line progenies and 263 progenies of new selections were examined. In addition 100 plants selected this year have been retained for study in the next season.

Item 2 in the programme of work should be decided on in consultation with Rai Saheb Sawhney on his return, as the Sub-Committee is of opinion that this work would be too much and would necessitate curtailment of programme in other aspects.

Hyderabad Pink and Spotted Boll-worm Scheme (*No.* 46).—The Sub-Committee have the following observations to make on the progress report on this scheme. There is no need to follow up further the degree of attack in cotton shoots. The work on buds has been limited to the experimental farm and the numbers examined are insufficient. It is necessary to examine buds collected over a much wider area; conclusion 2 under this section is thus premature.

Open flowers.—It is unnecessary to remove flowers from the plants for examination. This can be effectively done in the field. Flowers from a much wider area should be examined.

Green bolls.—Here also it is necessary to examine material from a wider area and not only from an experimental farm. It is noticed that the incidence of the pests increases up to February and March ; this is unlike the results obtained at Cawnpore. The figures presented show that there is a very considerable measure of attack and that work should be continued and expanded.

Estimate of crop loss.—Much more extensive data would be necessary in order to enable a representative figure for the Hyderabad State to be obtained but it should be pointed out that the loss of *kapas* is represented not only by the number of totally unpickable bolls but by damage of locks in lines not totally unpickable and that, the figures given on page 4, the loss of *kapas* was at least 20 per cent.

Hibernation of Platyedra.—This is the most important part of the work and it was observed that a large proportion of long cycle larvæ occurred. The question of hibernation in the soil should be tackled at once, and thoroughly, in order to ascertain whether the carry-over from season to season in the soil would be sufficient to defeat practical control measures consisting of seed treatment plus a close season.

The question of alternative hosts is also important.

Programme of work for 1934-35—*Item* (1).—Before this can be done it is necessary to find out whether re-infection from the soil takes place when the soil is left undisturbed.

Item (2), as already indicated, requires to be carried out on a broader basis.

Item (3) is the essential portion of the scheme but, unfortunately, no particulars of the work proposed have been presented.

Item (4).—The organisation of a control area would involve an area of 200 square miles in which :

(*a*) all cotton stalks would be removed and burnt (or otherwise disposed of) before the end of May,

(*b*) only treated seed would be sown, and

(*c*) no untreated seed for cattle food and no unginned *kapas* would be allowed to be kept after the 31st of May. If such a control area could be properly worked, it would at once give the answer to the question whether control by the above means is practicable or whether it would be defeated by other methods of carry-over of the pest from season to season. But the Director of Agriculture, Hyderabad, does not consider that such an area could be worked at present.

The information now before the Committee shows that Pink Boll-worm is a serious pest of cotton in Hyderabad State. The question of the hibernation of this pest in soil and other methods of carry-over in black cotton soil areas is of great importance to the whole of the black cotton soil tract, say, some nine million acres of cotton. The present staff employed on this scheme is not capable of doing the work which is now considered necessary and the Sub-Committee recommends that the services of Mr. Nangpal, one of the Committee's employees who is now available on the termination of the United Provinces Pink Boll-worm Scheme, should be utilised for the purpose. The cost of this proposal would be approximately Rs. 7,000 per annum for the two-year period, viz. :—

	Rs.
Pay at Rs. 450 per mensem	5,400 per annum.
Rent for house and laboratory, say	600 ,,
Travelling allowance, say	1,000 ,,
Peon	150 ,,

The Sub-Committee considers that the critical information could be obtained by a fully trained and experienced Entomologist in two years. The need for this appointment arises from the fact that the Hyderabad State has no Entomologist on its staff. In view of the importance of the problem the Committee might well bear the cost of this Entomologist. The Sub-Committee does not consider that the Cotton Research Botanist can be expected to do this work in addition to his own.

MG-III Bk Y 130—12

Co-ordination of the Hyderabad Pink and Spotted Boll-worm Scheme and the Central Provinces and Berar Entomological Scheme.—Reference from Special Meeting of Agricultural Research Sub-Committee.

In considering the progress report on the Hyderabad Scheme, the Sub-Committee came to the conclusion that the principal necessity is a fully qualified Entomologist to carry out research work on the lines there specified on Pink Boll-worm under black soil conditions. It is not possible for the Government Entomologist, Central Provinces, to undertake the supervision of any work outside the provinces but he is quite capable of looking after the work for which a grant has been sanctioned. It would however be quite feasible for a mutually agreed programme of work on boll-worm in the Central Provinces and in Hyderabad to be adopted and the Sub-Committee considers that this course should be followed. The Director of Agriculture, Central Provinces, agrees and is further of the opinion that the appointment of an experienced Entomologist for Pink Boll-worm work in Hyderabad would definitely be of assistance to the Central Provinces. The Sub-Committee considers that this is the best method of securing the co-ordination of the two schemes and that it would lead to more effective work although it would not reduce the cost.

Hyderabad Cotton Survey Scheme (*No.* 47).—The year under review is the third working year. As in previous years, 167 seed samples collected from villages were grown on the farm for botanical classification. Also cultivators' fields in 106 representative villages were visited for a study of the botanical species and varieties grown on them. Selections of promising individual types have also been made.

Bikaner Gang Canal Scheme (*No.* 48).—The report shows that of all cottons so far tested *Mollisoni* is best suited to the agricultural conditions obtaining at Ganganagar. Of the exotic cottons tested 289F seems to be fairly promising. Attention is also being paid to the selection of better strains from Mollisoni.

Baroda Root Rot Scheme (*No.* 49).—This scheme has completed its second year. Cultures from affected roots of cotton have given again the same organisms obtained the previous year. These were also found in the roots of other plants suffering from similar disease. The Sub-Committee notes that here, as in the Punjab, a species of *Rhizoctonia* is considered the main cause of the disease. Plants less susceptible to the disease have also been selected.

Burma Cotton Improvement Scheme (*No.* 50).—The report is for its third year of work. 18 demonstrators were at work and demonstrations of improved methods of cultivation were conducted on 57 holdings. It is stated that the average yield of seed cotton per acre on the demonstration holdings was much more than that in the respective "*Kwins*" in which they were located. Improved methods were adopted by 885 cultivators during the year under report, and the total area covered was 19,997 acres.

The Sub-Committee confirmed the opinion of the Special meeting of the Agricultural Research Sub-Committee (June 1934) that the scheme should be continued till the end of its sanctioned period and that no further extension should be granted.

Plant puller propaganda scheme in Surat and Broach Districts (*No.* 74).—Propaganda through posters, leaflets and magic-lantern lectures was carried out in Broach and Surat districts during the months of March to June 1934. In Broach District 3,440 pullers and in Surat District 7,161 pullers were purchased by the cultivators.

(2) *Seed Distribution and Extension Schemes.*

Hubli Scheme (*No.* 51).—In 1933-34 season 1,266,320 lbs. seed sufficient to cover about 131,708 acres was distributed in the area served by the Hubli Cotton Sale Society besides the 326,445 lbs. supplied to other parts of Dharwar district and elsewhere. The Department of Agriculture arranged during the year 24,000 acres of reserved area.

Gadag (*Extension*) *and Gadag* (*Supplementary*) *Schemes* (*No.* 52).—In 1933-34 the Society distributed 758,397 lbs. pure seed, enough to cover an area of about 75,000 acres, and the Department of Agriculture organised a seed growing area of about 24,620 acres.

Surat Scheme (*No.* 53).—During the year under report, 886,771 lbs. of 1027 A.L.F. seed were distributed in the Surat tract besides the 1,660,980 lbs. supplied to adjoining Indian States. An interesting feature is that 285,000 lbs. seed was purchased for sowing by the Sonsek Group of Co-operative Societies which had hitherto refused to grow this cotton.

Khandesh (Banilla) Scheme (No. 54).—The scheme is divided into six stages from the production of selfed seed on an area of five acres to covering the whole Khandesh tract with pure seed. The scheme has now completed the first four stages. The actual area sown during the year was 12,900 acres and the total quantity of seed obtained from this area was about 1,450,000 lbs. which would be enough for over 100,000 acres. Prices obtained for Banilla were satisfactory.

The Sub-Committee considered that spinning tests on Banilla should be supplied along with the Progress Report as the Committee should keep an eye on whether the cotton has continued to deteriorate as in the first few years it was grown.

Athani Scheme (No. 55).—From the reserved area of 7,157 acres which was maintained during the year, 298,760 lbs. of pure seed had been obtained at the time of the submission of the report. But for the damage done by floods which devastated 4,000 acres the programme laid down would have been adhered to. More seed was expected to be purchased and stocked for distribution during the current year.

Sind Scheme (No. 56).—During the year under report the work continued on the same lines as in previous years on both the Right and the Left Banks of the river Indus. On the Right Bank 27 W.N. and 4F-98 were demonstrated at 35 centres and practically everywhere the latter proved the better yielder of the two. The superiority of 4F-98 over 27 W.N. and 289-F-1 was also proved by the results obtained from the comparative tests of these cottons. The publicity and propaganda work of the past 2 to 3 years has resulted in an area of about 1,500 acres being brought under cotton during the year by *zamindars* themselves.

The results of the comparative tests carried out on the Left Bank in 22 centres in the main cotton growing areas show that 27 W.N. and 289F-1 are best suited to Eastern Nara and Nawabshah districts and 289F and 4F-98 to Southern Jamrao tract; in Hyderabad District 285F-2 and 289F-1 did better than the other two varieties. As a result of these demonstrations, the area under cotton in this tract has increased from 3,000 acres in 1931–32 to 28,000 in 1933–34.

The Sub-Committee is of opinion that attempts should be made at as early a date as possible to fix zones for the different kinds of cottons to be recommended. The publicity and propaganda campaign initiated during the year proved to be very useful and the Sub-Committee recommends that it should be continued.

Madras (Tiruppur) and Co. 2 Schemes (No. 57).—In 1932–33, the Department of Agriculture organised a seed farm area of nearly 2,000 acres which produced 498,600 lbs. pure seed, sufficient to cover an area of about 20,000 acres.

In 1933–34, the seed farm area, as stipulated was extended to more than 4,000 acres which were expected to yield 10 lakhs pounds of pure seed enough for about 40,000 acres. The Report contained a considerable amount of extraneous matter not connected with the scheme and the Sub-Committee recommends that these reports should be as concise as possible consistent with clearness. Very little idea was given as to what had been spent from the funds sanctioned. The scheme however worked satisfactorily.

H1 Scheme (No. 58).—The Department of Agriculture supplied the Guntakal and Hagari Co-operative Societies with sufficient pure H1 seed for sowing on a controlled area of 10,000 acres. Of the seed obtained from this area about 1,000,000 lbs. have been stocked by the two Societies, the rest being left with the cultivators. In addition the Department of Agriculture arranged, as usual, a seed farm area of 2,895 acres under their own control and the seed secured from this area will be handed over to the Societies.

It has been admitted in the Progress Report itself that the scheme generally did not work satisfactorily. The Sub-Committee considers that the scheme as at present exists should be closed down and a fresh one started if it overcomes all the difficulties encountered in the past season, proposals for which are mentioned in the Report.

Central Provinces (Verum) Scheme (No. 59).—In 1933-34 season, the Department of Agriculture distributed 2,568 khandies of pure seed which was enough to sow an area of 89,560 acres, and sold through pools 5,087 bales of pure Verum cotton. The premium obtained for cotton varied from Rs. 24 to Rs. 45 on Broach F.O.R. Bombay basis.

3,864 khandies of Verum 262 seed and 181 khandies of Late Verum, V. 434 and Bani seed have been stocked for distribution in 1934-35 season.

The working of the scheme was very satisfactory and the Sub-Committee recommends that it should be combined with the new Extension Scheme already sanctioned as suggested by the Director of Agriculture. (Subject 87).

Hyderabad Scheme (*No.* 60).—During the year under report, the Department of Agriculture purchased from the Sale Societies 330,260 lbs. Jayawant and Upland seed and distributed the whole quantity in 136 villages for sowing on an area of nearly 17,100 acres. In addition, enough Jayawant seed for another 7,000 acres was distributed by the Kopbal Sale Society and the cultivators themselves.

The Director of Agriculture informed the Sub-Committee that arrangements are being made by the Hyderabad Agricultural Department to organise local seed production under their supervision in order to obviate the necessity of importing large quantities of seed from the Bombay Presidency.

Statement of costs for cotton ginned at the Lyallpur Ginnery (*No.* 61).—Total cost of ginning one maund of *kapas* was Re. 0-2-9 for saw gin and Re. 0-7-10 for roller gin.

Baroda Scheme (*No.* 62).—28,000 lbs. pedigree seed and 11,200 lbs. pure seed of 1027 A.L.F. cotton, enough to cover an area of roughly 2,000 acres were distributed for seed multiplication to the members of the four cotton groups at Maroli, Umbhel, Dhundhesa and Kosamba. In addition, from the five seed depots at Maroli, Vesma, Umbhel, Baben and Kosamba, 218,400 lbs. of pure 1027 A.L.F. seed received from the Bombay Agricultural Department were distributed on mass scale.

The Sub-Committee suggests that a larger area than that suggested in the proposals should be controlled in view of the fact that Baroda has an area of nearly two lakhs of acres under cotton.

(B) Report of the Agricultural Research Sub-Committee on Extensions and Modifications of old schemes.

(1) *Agricultural Research.*

Scheme for Survey of Small Leaf Disease of Cotton in Bombay Presidency.—The Sub-Committee does not recommend the extension of this scheme as the collection of further information will serve no useful purpose.

Punjab Spraying Trials Scheme—Modification of programme.—The Sub-Committee approves of the action taken by the Director of Agriculture.

Gujerat Plant Puller Propaganda Scheme.—As the original scheme was highly successful during the year and in view of the good work accomplished the Sub-Committee recommends the extension of this scheme for a period of two years at an estimated cost of Rs. 19,010 to be financed from the remaining balances saved under the Clean-up Scheme.

(2) *Technological Research.*

Technological Assistant, Gujerat.—The Sub-Committee recommends the extension of the appointment of the Technological Assistant at Surat for a period of five years.

(3) *Seed Distribution and Extension.*

Central Provinces Verum Scheme.—At the request of the Director of Agriculture, Central Provinces, the extension of this scheme was not separately considered, as this scheme is incorporated in the revised proposals for the "Scheme for extension of long staple cotton in the Central Provinces and Berar" submitted at this meeting (*vide* Subject 87). The Sub-Committee recommends that an additional grant of Rs. 1,35,022 spread over a period of five years and two months be made to this extended scheme in addition to the grant already made at the last meeting of the Committee.

(C) Report of the Agricultural Research Sub-Committee on New Schemes.

(1) *Agricultural Research.*

Gujerat Root Rot Scheme (*No.* 63).—In view of the fact that schemes on the same subject are in progress in the Punjab and Baroda State and are obtaining results, it seems unnecessary to sanction another scheme on the same subject.

Scheme for the study of "Lang" caterpillar pest in Gujerat (*No.* 64).—"Lang" (*Chickling Vetch*) is a crop which gives the cultivator a gross return of Rs. 30 per acre for its grain and fodder besides being a short period good leguminous rotation and cleaning crop for cotton, and a caterpillar pest has lately been causing damage to this crop in Gujerat to the extent of 30 to 90 per cent. The Bombay Department of Agriculture, therefore, proposed an investigation of this pest for four years and four months at an estimated cost of Rs. 11,683 *plus* leave salary.

In the opinion of the Sub-Committee this is not a cotton problem and not suitable for a grant from the Central Cotton Committee.

Gujerat Goghari Survey Scheme (*No.* 65).—This scheme is a necessary corollary to the accepted policy of the Committee to grow only 1027 A.L.F. in the tract lying south of the Nerbudda, and the scheme proposes to make an extensive survey of the cotton field in the tract with a view to stamp out Goghari from wherever it is found. The Sub-Committee recommends that this scheme be sanctioned for a period of five years at an estimated cost of Rs. 5,000.

Baroda Goghari Survey Scheme (*No.* 66).—This scheme is, in its object, identical with the Gujerat Goghari Survey Scheme, and will take concerted measures in the Baroda State territories included in the tract. The Sub-Committee recommends that the scheme be sanctioned for a period of five years at an estimated cost of Rs. 5,000.

Punjab Jassid Scheme (*No.* 67).—This scheme which was referred back to the Director of Agriculture, Punjab, at the last meeting for modification of programme, is now resubmitted.

The Director of Agriculture, after discussion, desires to withdraw this scheme. The Sub-Committee agrees that regular observations on the Jassid resistance or susceptibility of the new strains of cotton produced by the Cotton Research Botanist are necessary but considers that for the present this can be done by the existing entomological staff at Lyallpur. If the Director of Agriculture finds that this is not possible, an application for an Assistant for the purpose should be made in due course.

Red Leaf Disease Scheme (*No.* 68).—This disease of American cotton in Mysore is said to cause an annual loss of about 520 bales, and is a factor which limits the cultivation of American cotton.

Red Leaf in cotton is considered to be an All-India problem. It is part of the larger problem of the satisfactory acclimatisation of American cottons in India. A good deal of work has already been done on it in other parts of India. It is therefore recommended that the Secretary be requested to obtain all relevant information from workers on the problem in other areas, particularly Sind, the Punjab, the Institute of Plant Industry and Coimbatore. The scheme should be considered in the light of the information collected, at the cold weather meeting.

Bombay Seed Defibration Scheme (*No.* 73).—The Vice-President offered to have one defibrating machine put up at Palej in connection with ginneries there, and to supply seed and power free as required. The machine would be provided and installed from the Indian Central Cotton Committee funds and would remain the Indian Central Cotton Committee's property. The Sub-Committee willingly agreed to accept this kind offer.

The Director of Agriculture, Bombay, withdrew his request for the other two machines, as he believed all the necessary information could be obtained from the machine to be installed at Palej. It was noted that the Punjab machine had been installed at Khanewal in connection with the Khanewal Cotton-growing Syndicate's plant at that place.

Mr. C. G. Paranjpe, Agricultural Engineer, Bombay Presidency, then drew up a revised budget for the working of one machine at Palej for one year, which is appended, with an explanatory note. (Enclosure I).

Baroda Plant Puller Propaganda Scheme (*No.* 86).—The Committee in sanctioning the Plant Puller Propaganda Scheme for Broach in August 1933 agreed that if the results were satisfactory, similar propaganda might be necessary in Baroda State.

The Sub-Committee approves in general the Baroda Scheme and recommends it for adoption at an estimated cost of Rs. 9,380. It suggests however that the pay of the Graduate Assistants should not exceed Rs. 70 per mensem and that after the first year of intensive propaganda a larger number of *Kamgars* on lower pay might be employed instead of the more expensive Fieldmen.

(2) *Technological Research.*

Technological Assistant in Sind.—The Sub-Committee recommends the appointment of a Technological Assistant in Sind for a period of three years.

(3) *Seed Distribution and Extension.*

Wagad Seed Distribution and Extension Scheme (*No.* 69).—The Sub-Committee reconsidered this scheme in accordance with the decision of the Special meeting of the Agricultural Research Sub-Committee.

Mr. Patel in forwarding the Scheme wished to have an organisation ready to put out a new Cross with which he is working and which he expects will be considerably better than

Wagad 8. The locality has peculiar local difficulties in getting a new cotton taken up and it was his suggestion that the Department would like to work out a way which would be likely to succeed so that when the cotton is ready for distribution no time would be lost in getting it taken up. In view however of the decision of the Special Sub-Committee held in June, this Sub-Committee feels that it cannot recommend a scheme which has an element of experiment in it. It feels however that the Committee might help in this work and would suggest that Mr. Patel be asked to put up a modified scheme to cover the initial stages of testing and distribution.

C. 402 *Scheme* (*No.* 81).—This scheme has already received the approval of the Agricultural Research Sub-Committee, the final decision regarding funds being left to the Standing Finance Sub-Committee which decided in February 1934 that it should not be put into operation for the present.

The Sub-Committee now recommends that the question of starting it from the year 1935 should now be reconsidered. The area suitable for the cotton under this scheme is about 30,000 acres spread over two districts and may be extended over four other districts covering another 30,000 acres. The crop being irrigated yields about 800 lbs. per acre.

In view of the importance of increasing the supply of staple cotton in India, the Sub-Committee considers that this scheme is of sufficient importance to warrant a grant from the Indian Central Cotton Committee, and that it should be considered by the Standing Finance Sub-Committee in relation to the financial position of the Committee.

(D) Report of the Agricultural Research Sub-Committee on Research Students.

The Sub-Committee considered and approved the progress reports and programmes of work of the following research students :—

(1) Mr. Tashkir Ahmed under training in Entomology at Cambridge under Dr. A. D. Imms.

(2) Mr. Sant Singh Verma under training in Plant Physiology at London under Professor Blackman.

(3) Mr. S. N. Venkatramanan under training in Statistics at Calcutta under Professor P. C. Mahalanobis.

The Sub-Committee recommends the proposed extension of Mr. Sant Singh Verma's scholarship by five months.

In view of the nature of the breeding work likely to be undertaken by Mr. Venkatramanan, it is suggested that the Secretary should write to Professor Mahalanobis and ask him if some consideration may be given to work on third degree statistics as outlined in a paper by Fisher, Immer and Tedin on their use in the study of quantitative inheritance.

The Sub-Committee also approved of the final reports of Mr. Brajandra Nath Bhargava (Cotton Marketing and Economics, Lucknow) and Mr. Bhola Nath (Plant Breeding and Cytology, Indore). The former need not be published, and the latter may be included in papers to be published at a later stage. The modified programme of work of Mr. Shama Iyengar due to the curtailment of study leave was also approved.

The Sub-Committee notes that Mr. Bhola Nath has been offered a post at Indore, and that Mr. Madan Lal Bhatia is proceeding to Cambridge for further studies, and that there is no post open for Mr. B. N. Bhargava.

In view of the possibility of a U. P. candidate proceeding to Cambridge to study Genetics under Professor Biffen, the Sub-Committee recommends that the award of a scholarship in Genetics sanctioned previously may be held in abeyance.

The Sub-Committee recommends the following training grant, the application * for which is attached :—

(1) Rs. 100 per mensem to Mr. Nazir Ahmad (Punjab) for two years for studies in Entomology at the Imperial College of Science and Technology, London.

The Sub-Committee considered Mr. Akbar Ali's (Punjab) application for a training grant of Rs. 150 per mensem for higher studies in plant breeding in England and recommends that he be given one year's training in plant breeding at Indore under Mr. Hutchinson. Further consideration of his application may be postponed until a report is received on his work at Indore from Mr. Hutchinson.

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* Not printed.

(E) General.

Disease of Malformation in cotton.—The Sub-Committee noted the replies received from the Directors of Agriculture on this subject.

Minimum staff in each scheme.—The Sub-Committee considered Mr. Ramanatha Iyer's letter on the subject and decided that a uniform standard of staff for all schemes of a similar nature is neither possible nor desirable. It agreed, however, that staff proposals should be carefully scrutinised.

Monograph on Surat Physiological Research Scheme.—In the opinion of the Sub-Committee it should be pointed out to Mr. Joshi that the object of the research was to study the shedding of buds, bolls and flowers and that though he has emphasised the effect of nitrogen on the yield of cotton, he has not brought out clearly the effect of nitrogen deficiency (and of remedying this deficiency) on boll, bud and flower retention although he has data from which this could be done. The Sub-Committee considers that its previous recommendation should be accepted. The author has complied with the Sub-Committee's suggestions in two respects. As regards the method used for nitric nitrogen and its relative sensitiveness, the Sub-Committee still have no objection to this being left to the referee to whom the paper will be referred in due course. The same applies to the data about evaporation as to the value of which the Sub-Committee is in doubt.

The Sub-Committee considers that the monograph will be improved by condensation—especially as there are 45 pages of introductory matter and chapter 6 is both lengthy and diffuse. There is room for condensation without omission of any actual data and the Sub-Committee advises this course.

The report may then be submitted to the Imperial Council of Agricultural Research direct.

Madras Pempheres and Physiological Scheme.—The revised list of apparatus submitted for approval in itself is quite reasonable. As however the Sub-Committee does not recommend the continuance of the bio-chemical part of the scheme, there is no need to sanction the list of apparatus.

The Sub-Committee decided that the composition of the Sectional Sub-Committees with the subjects allotted to them be intimated well in advance so that members may have sufficient time to acquaint themselves thoroughly with the schemes which they are expected to comment on.

The Sub-Committee also decided that in Seed Distribution Schemes a short *resumé* should be given from year to year showing the progress made not only in the year under report but in previous years. This is to enable the Committee to see at a glance what progress has been made from the beginning of the scheme.

The Sub-Committee recommends that in all Seed Schemes intensive propaganda should be carried out by all possible means against the inferior cotton grown in the tract and in view of the efficiency and usefulness already demonstrated of such work conducted by the Publicity Officer of the Indian Central Cotton Committee, notably in the case of the Sind Seed Extension Scheme and the Broach Clean-up Scheme, the Sub-Committee recommends that fuller use be made of the services of the Publicity and Propaganda Officer.

Enclosure I.

Revised Estimate for a Desegundo Defibrating machine to be installed at "Palej" at Sir Purshotamdas Thakurdas Ginning Factory.

Capital Expenditure.

		Rs.
1.	One Desegundo Defibrating machine complete with Fast and Loose Pulleys	2,850
2.	Driving Pulley on countershaft with suitable belting	150
3.	Lint Chamber	150
4.	Feeding platform	110
5.	Spare fibrating elements	87
6.	Transport, insurance and fixing	250
7.	Sundries	100
	Total initial outlay ..	3,697
	Say	3,700

Recurring Expenditure.

1.	One Operator on Rs. 70 per mensem and a mate on Rs. 30 per mensem for six months	600
2.	Travelling allowance	150
3.	Cost of seed for treatment and observation	500
4.	Unskilled labour, transport on finished seed and sundries.. ..	500
	Total recurring expenditure per year ..	1,750

The output of the machine per hour is 8 cwts. and if it is worked for 100 working days in the season at 8 hours a day, it will deal with 6,000 to 6,400 cwts. of seed. The defibrated seed can be sent out to the Cotton Breeders for germination tests and to the Live Stock Expert to Government for feed tests. A portion of the seed can also be sent out for hulling and expressing oil through Rotary mills and through the Oil Expeller with a view to see whether the expensive and complicated method of expressing oil with a Hydraulic Press can be eliminated. The last experiment will be conducted on a very small scale and will not involve much expenditure as it will be carried with those who are prepared to help and co-operate with the Department.

APPENDIX VII.

SUBJECT 71—*Report of the Standing Finance Sub-Committee—*

(*a*) Balance Sheet as at March 31st, 1934.

(*b*) Final Accounts, 1933-34.

(*c*) Revised Estimates, 1934-35.

(*d*) Budget for 1935-36 (Government servants).

The Standing Finance Sub-Committee held five meetings since the last meeting of the full Committee in January 1934. Mr. J. O. G. Barnes having retired, his place on the Sub-Committee was taken by Mr. G. C. R. Coleridge and on the latter's resignation, Mr. F. G. Travers has been appointed in his place. Mr. J. Voneseh has temporarily gone out of India, and under Rule 4 of the Rules under Section 16 of the Indian Cotton Cess Act, Seth Sakarlal Balabhai has been appointed to fill this casual vacancy.

2. A Balance Sheet of the Committee's accounts, as at March 31st 1934, is submitted. This shows the income and expenditure under the budget heads from the beginning of the Cotton Cess, i.e., for eleven years, and has been prepared from the audited accounts. A Balance Sheet of the Provident Fund is also enclosed.

3. A statement of accounts for the year 1933-34 as audited by the Committee's Auditors is attached, together with a detailed account of the Final Accounts. From this it will be seen that cotton cess receipts amounted to Rs. 5,83,672-8-7 against a revised estimate of Rs. 5,00,000. Interest on investments came to Rs. 1,32,624-0-5 against Rs. 1,33,700 estimated. Expenditure amounted to Rs. 9,42,986-13-9 against the revised estimate of Rs. 12,34,925-5-0. There were savings under practically every head of expenditure and these are available for future use, if required, except the savings under "Administration", "Improvement of Cotton Marketing", "Printing and Propaganda", "Technological Laboratory—Working" and "Research Studentships." The closing balance on the 31st March 1934 was Rs. 27,49,659-14-7 against Rs. 29,69,850-9-9 last year, so that the Committee had to spend Rs. 2,20,190-11-2 from the Reserve.

A statement of the Provident Fund account for 1933-34 is also attached.

4. The Revised Estimates of Receipts and Expenditure for the current year are enclosed and are subject to alterations recommended by the Agricultural Research Sub-Committee and approved by the full Committee. No change has been made in the estimates for Cotton Cess and Interest. Due to heavy sale proceeds, the Miscellaneous Receipts have been raised to Rs. 4,000 against the estimate of Rs. 2,500. The expenditure has been estimated at Rs. 13,78,021-8-0 against the sanctioned budget estimates of Rs. 13,68,960-4-0, the increase of Rs. 9,061-4-0 being chiefly due to additional requirements under the various schemes.

5. As required by the Cotton Cess Rules, the Budget for 1935-36 for the pay of Government officers and other permanent Government servants employed by the Committee is submitted for formal sanction.

6. The Sub-Committee also dealt with the Government accounts for 1933-34 for the fumigation of American cotton and its recommendations form a separate subject on the agenda of the Committee.

7. The Indian Central Cotton Committee at its last meeting, while adopting the report of the Agricultural Research Sub-Committee, approved of the order of priority in which the new research and seed schemes and the extensions of schemes already under operation might be sanctioned, and agreed to refer to the Standing Finance Sub-Committee the priority list in order that it might take into account the present financial position of the Committee and decide which of the schemes should be sanctioned forthwith. The Sub-Committee at its February meeting considered the subject and sanctioned all schemes except the new scheme for the propagation of C. 402 cotton in the Hardoi and neighbouring districts of Lucknow and Sitapur, United Provinces. The Sub-Committee considered at its subsequent meeting the request of the Director of Agriculture, United Provinces, for a reconsideration of its decision and decided that since there was already a break in the continuity of the seed distribution work, it was desirable to put off the consideration of the subject till the Agricultural Research Sub-Committee at its special meeting to be held on the 29th June 1934 laid down its research and seed distribution policy. The Sub-Committee considered the subject again and decided to refer it to the Agricultural Research Sub-Committee to be held on the 25th August 1934 for re-examination with regard to its urgency or necessity. This forms a separate subject on the agenda of the Committee.

8. The Joint Sub-Committee of the Imperial Council of Agricultural Research and the Indian Central Cotton Committee at its meeting held in January 1933 agreed to Bengal being brought in the scope of the scheme for investigation into the cost of production of sugar-cane, cotton and their rotation crops by the inclusion of two of its tracts, viz., (1) Bogra tract and (2) Birbhum tract, under one District Supervisor. The Government of Bengal, however, found it difficult to run two districts with one Supervisor and applied for an additional annual grant of Rs. 720 for the travelling allowance of another Supervisor whose pay would be met by the Viswa Bharti Institute. This proposal, as already reported at the last meeting of the Committee, was agreed to by the Sub-Committee at its meeting held in October 1933. Subsequently, the Bengal Government applied for an additional grant of Rs. 250 under " Contingencies " for both Supervisors and the Sub-Committee sanctioned the request provided the additional expenditure could be met from savings in the grant already sanctioned.

9. The Sub-Committee sanctioned the re-allotment of Rs. 391 which had already been surrendered for expenditure during the year 1933-34 on the Burma Cotton Improvement Scheme.

10. The Sub-Committee considered the question of payment of travelling allowance to invitees to the meetings of the Indian Central Cotton Committee and its Sub-Committees and decided that they should be paid only out-of-pocket expenses up to a maximum of a single first class fare, mileage by road of six annas and a daily allowance not exceeding Rs. 10 per day for the days they actually attend the meetings.

11. The Sub-Committee, on receipt of a telegram from the Government of India announcing the continuance for one more year of the emergency cut of 5 per cent. in salaries of their staff, decided to follow the Government lead and apply a similar cut to all Committee's servants except those who are already exempt from it in *lieu* of their revised lower scales of pay. The Sub-Committee also decided to address the Board of Governors of the Institute of Plant Industry, Indore, to continue for another year the 5 per cent. cut in salaries of the Institute staff. The Board has agreed to fall in line with the Committee. Mr. F. K. Jackson, who is on special contract, has been exempted from the cut, and it is not known if Mr. Hutchinson also who is on similar contract is exempted from it.

12. The Sub-Committee considered the question of the revision of pay of Junior Clerks in the Secretary's office and decided to fix it on Rs. 60—3—90 in the place of the old scale of Rs. 70—4—90 for new entrants, with retrospective effect from the 1st October 1933.

13. The Local Sub-Committee at its meeting held on the 19th January 1934 decided that a joint representation of the East India Cotton Association and the Indian Central Cotton Committee should be sent to the Bombay Government for abolishing road tolls levied on bullock carts and motor lorries carrying *kapas* and ginned cotton. As the Local Sub-Committee was not likely to meet soon, the Standing Finance Sub-Committee considered the joint draft of the two bodies and, while approving of it, desired to point out that tolls of this kind were against the policy of the Government of India who were opposed to levying any duties which stood in the way of free flow of trade and traffic.

14. As required by Rule 9 (1) (*a*) of the Indian Cotton Cess Rules, the Standing Finance Sub-Committee appointed an Expert Sub-Committee consisting of the President, Vice-President and Messrs. Stewart, Burt and Saklatvala to examine the applications for the appointments of a Plant Physiologist and a Bio-Chemist in connection with the scheme for investigation into the causes of the periodic failure of American cotton in the Punjab. The Standing Finance Sub-Committee considered the recommendations of the Expert Sub-Committee and approved of the appointment of Professor R. H. Dastur as Plant Physiologist on a starting pay of not exceeding Rs. 900 in the scale of Rs. 900—40—1,060 subject to such cuts as may be in force from time to time. The Sub-Committee also approved of the appointment of Mr. A. V. Varadaraja Iyengar to the post of Bio-Chemist as recommended by the Expert Sub-Committee.

15. The Technological Research Sub-Committee at its meeting held in January 1934 agreed to the Laboratory undertaking special tests for private bodies and individuals provided no inconvenience was thereby caused to the ordinary work of the Laboratory and authorised the Standing Finance Sub-Committee to fix the scale of fees for such tests in consultation with the Director, Technological Laboratory. The following scale of fees proposed by the Director was approved by the Standing Finance Sub-Committee, subject to such alterations as may be found necessary at the end of six months :—

		Rs.	a.	p.
(1)	Variety of Cotton (Broad classification)	25	0	0
(2)	Identification of fibres (microscopical tests)	15	0	0
(3)	Percentage of size	7	8	0
(4)	Percentage of grease	7	8	0
(5)	Percentage of free acid	15	0	0
(6)	Presence of mildew	7	8	0
(7)	Causes of mildew growth	30	0	0
(8)	Percentage of immature fibres :—			
	(*a*) in lint (or *kapas*)	10	0	0
	(*b*) in yarn or cloth	15	0	0

16. The Sub-Committee considered the question of charging the Central and Local Government Departments for tests carried out at the Technological Laboratory and decided that as usual no fee should be charged for any tests made for the Department of Agriculture and that all tests made for any other Government Department should be charged for at 25 per cent. below ordinary rates.

17. The Indian Central Cotton Committee at its meeting held in January 1934 agreed to refer to the Standing Finance Sub-Committee the question of the revision of the grade of pay of Head Clerk's post at the Technological Laboratory. The Sub-Committee considered the subject at two of its meetings and decided finally that the scale of pay of the Head Clerk should be raised from Rs. 150—10—200 to Rs. 150—10—200 (Efficiency Bar)—10—240, provided that except by a resolution of the Standing Finance Sub-Committee no successor of Mr. Majumdar, the present Head Clerk, be permitted to pass the Efficiency Bar.

18. The Sub-Committee considered a letter addressed by the United Provinces Government to the President of the Committee asking for loan of the services of the Publicity Officer for a period of one year in the first instance, free of cost, the Local Government paying only his travelling allowance. The Sub-Committee decided that Mr. Mihra's services might be lent to the United Provinces Government for a period not exceeding six weeks provided the Local Government were prepared to pay his travelling allowance.

19. The Sub-Committee reported to the last meeting of the full Committee that the Punjab Government had raised an objection to the appointment of Mr. Mohammed Afzal as Cotton Research Botanist in the Punjab and that a reply to their objection had been submitted to the Government of India justifying the appointment of Mr. Afzal. The Punjab Government have since withdrawn their objection. The Sub-Committee considered and approved of the proposal of the Punjab Government fixing the pay of Mr. Mohammad Afzal at Rs. 480 with the usual annual increment in the scale of Class I—Provincial Agricultural Service, *viz.*, Rs. 360—40—720/40—800—50—1,150.

20. The Sub-Committee considered the request of the Punjab Government that, out of the savings now accruing to the Committee due to the appointment of Mr. Mohammad Afzal as Cotton Research Botanist on a lower rate of pay, a lump sum might be placed annually at the disposal of the Local Government to enable them to invite one of the scientists engaged on cotton research work in other parts of the world to visit the Punjab in the course of the cold weather and advise the Department of Agriculture on the best and most up-to-date methods of investigation. The Sub-Committee decided that any specific proposal put forward by the Punjab Government should be considered on its own merit and that no general sanction was necessary.

21. The Sub-Committee sanctioned a total sum of Rs. 7,600 for the purchase of additional machinery for the Blow Room in connection with the scheme for the extension of the Technological Laboratory sanctioned by the Committee at its last meeting.

22. The Indian Central Cotton Committee at its last meeting agreed to the proposal of the Central Provinces Government that the pay and allowance of Mr. D. N. Mahta, Economic Botanist to Government, Central Provinces, should be met from the Committee's funds provided a second Economic Botanist was appointed by the Local Government. The Sub-Committee considered the reply of the Local Government agreeing to relieve Mr. Mahta of all work other than cotton and to make their own arrangement for the work on other crops and decided to pay Mr. Mahta his full pay and a duty allowance of Rs. 200 per month.

23. The Sub-Committee sanctioned an additional grant of Rs. 750 for 1933-34 for the Sind Physiological Research Scheme for the reconstruction of the field Laboratory, provided the additional grant could be met from the savings of previous years.

24. The Sub-Committee at its meeting held on the 20th November 1933, while considering the revised estimates of expenditure during the extension period of the Madras Pempheres and Physiological Scheme, decided that in view of this scheme being almost entirely for the benefit of the Madras Presidency, the Local Government should be requested to waive the recovery of leave and pension contributions from the Committee. The Madras Government having expressed their inability to agree to this decision, the Sub-Committee decided again to make a further representation to them to reconsider their decision and waive the recovery of both leave and pension contributions as in the case of other provinces.

25. The Committee at its meeting held in August 1933, while sanctioning the extension of the Hyderabad Botanical Research Scheme for a period of five years from the 1st April 1934, approved of the recommendation of the Special Sub-Committee, appointed to consider the question of merging of the Committee's grants into provincial revenues, that the pay of the Cotton Research Botanist should be fixed at Rs. 1,000—50/2—1,250. The Government of India, while conveying their sanction to the extension of the scheme, pointed out that the pay sanctioned by the Committee for the Cotton Research Botanist was much in excess of the scale of Rs. 325—25—650 (E.B.)—35—1,000 fixed for Class I appointments under the Central Agricultural Department, including that of the Second Economic Botanist at Pusa and suggested that he might continue in his present scale of pay of Rs. 700—100—1,000. The Sub-Committee, approving of the suggestion of the Government of India, agreed to fix the maximum pay of the Cotton Research Botanist, Parbhani, at Rs. 1,000 per mensem.

26. The Sub-Committee sanctioned various new items of expenditure required in connection with the studies of village consumption of cotton in the United Provinces, Sind, Madras and the Punjab, subject to the condition that the excess expenditure should be met from the grants already sanctioned. The Sub-Committee also extended the period of enquiry in the Southern Division of the Bombay Presidency by one month and in the Baroda State by 15 days, the additional expenditure being met from the grant already sanctioned. A supplementary grant of Rs. 1,000 was also made to the Bombay Cotton Forecast Improvement scheme for meeting the travelling expenses of the Officer-in-charge in visiting Indian States.

7. The Sub-Committee accepted the resignation of Mr. D. F. Kapadia, Assistant Technologist, Technological Laboratory, Matunga, and decided that the question of his leave should be referred to the full Committee at this meeting. This subject is dealt with separately on the agenda of the Committee.

28. The Sub-Committee decided that, in future, applications for appointments outside the Committee's service from all officers of the Technological Laboratory whose maximum pay did not exceed Rs. 250 should be forwarded through the Secretary and all other applications through the Standing Finance Sub-Committee.

29. The Sub-Committee considered the Audit Report for the year ended 31st December 1932 of the Hubli Co-operative Cotton Sale Society and agreed to pay to the Society the maximum subsidy of Rs. 5,000 and interest of Rs. 596-10-0.

30. The Sub-Committee recorded the following remarks of the Government of India while conveying sanction to the budget of the Committee for the year 1934–35 :—

"The Government of India understand that the attention of the Indian Central Cotton Committee has been drawn to the danger of the depletion of its reserve funds and that steps have been taken to avoid such a contingency. They trust that effective measures will be adopted towards this end."

31. The Indian Central Cotton Committee, at its last meeting, resolved that the Budget of the Institute of Plant Industry, Indore, for 1934–35 be reduced by Rs. 40,000 or such sum as the Standing Finance Sub-Committee might decide. As per powers delegated to it by the full Committee, the Sub-Committee considered the subject at three of its meetings, but no final decision has yet been arrived at as the negotiations between the President of the Committee and the President of the Board of Governors of the Institute are not yet completed.

32. The Sub-Committee considered and refused the request of Rai Saheb Kalidas Sawhney, Cotton Research Botanist, Parbhani, for a reconsideration of the Committee's decision arrived at in August 1933 refusing him permission to visit, at the Committee's expense, Egypt and various institutes and research stations in England. The Sub-Committee, however, sanctioned the extension of his leave by ten days on half-average pay and agreed to the proposal of the Hyderabad Government to grant an allowance of Rs. 50 per mensem to the Deputy Director of Agriculture, Parbhani, for being in additional charge of the Committee's Botanical Research Scheme during the absence on leave of the Cotton Research Botanist.

33. The Sub-Committee refused the request of the Burma Government for additional grant to meet the travelling allowance of the Deputy Director of Agriculture, Myingyan Circle, in charge of the scheme for the improvement of cotton in the Wagale tract of Burma.

34. The Sub-Committee sanctioned the extension of the Madras Herbaceum Research Scheme for a period of one year from the 1st June 1934 at an estimated cost of Rs. 8,803.

35. The Sub-Committee as decided by the full Committee at its meeting in February 1933 sanctioned a sum of Rs. 1,000 required for expenditure during the current financial year on the travelling allowance of the Officer in charge of the Rohilkhand and Bundelkhand Cotton Survey Scheme, United Provinces, subject to reconsideration of this item as soon as the orders of the Government of India on the status of the Committee's servants were received.

36. While considering the Progress Report on the Sind Physiological Research Scheme, the Committee at its meeting held in August 1933 desired to draw the attention of the Bombay Government to the fact that considerably more land was required for the field experiments now being conducted by the Physiological Section at Sakrand. The Sub-Committee considered the proposal of the Chief Agricultural Officer in Sind for additional expenditure during the current year of Rs. 1,550 for the lease, development and cultivation of the newly leased land as recommended by the Committee and decided that, in view of the accepted policy of the Committee not to provide land or buildings, the Chief Agricultural Officer in Sind should be requested to approach the Government of Bombay for the lease and development of the land and that, in the meanwhile, he might be advanced the whole amount of Rs. 1,550 till he obtained necessary sanction from his Government.

37. The Audit Reports of the Gadag Co-operative Cotton Sale Society for the years ending 31st December 1932 and 1933 were considered by the Sub-Committee when it was decided that the Society should be paid as follows :—

Rs.	a.	p.	
835	10	0	for interest and Rs. 2,547-1-4 for subsidy during 1932-33.
662	2	6	for interest and Rs. 5,000 for subsidy during 1933-34.

38. The Sub-Committee sanctioned leave to Mr. R. P. Richardson, Spinning Master of the Technological Laboratory (now Officiating Director), for four months and three days from the 10th September 1934 or any subsequent date which might be suitable to both Mr. Richardson and Dr. Nazir Ahmad. The Sub-Committee also agreed that Mr. Richardson should be provided with a return Second Class "A" ticket from Bombay to London.

39. At its meeting held in March last, the Special Sub-Committee appointed by the Committee to consider the question of a wider market for Indian cotton decided that Dr. Nazir Ahmad, who was on leave in Europe, should be asked to get into touch with the various industrial research associations in Europe and to find out to what extent the Committee's Technological Laboratory could collaborate with them. As Dr. Nazir Ahmad expressed his inability to carry out in full the suggestions of the Special Sub-Committee due to the limited time at his disposal, the Sub-Committee decided that he should be deputed for one month to visit industrial research associations in Europe and that during the period of his deputation he should be paid his full pay and travelling and halting allowances as admissible under Rules of the India Office (Appendix 7 to the Fundamental Rules).

40. The Technological Research Sub-Committee at its last meeting decided that quotations of reliable firms of architects should be obtained for the extension of the Technological Laboratory. The Sub-Committee considered quotations offered by six firms and decided to appoint Mr. Ditchburn as Architect for extensions to the Technological Laboratory.

41. The Committee at its last meeting decided that during the absence on leave of Dr. Nazir Ahmad for a period of 4 months and 24 days, Mr. R. P. Richardson should officiate as Director in consideration of which he should be granted an honorarium of Rs. 1,000. In view, however, of the extension of his acting period for one month, due to Dr. Nazir Ahmad's deputation, referred to in paragraph 39, the Officiating Director applied for an increase of the honorarium already sanctioned to him. The Sub-Committee after considering the application decided that in view of the strong opinion expressed by several members of the Technological Research Sub-Committee against sanctioning any acting allowance, Mr. Richardson's request should not be complied with.

42. The Sub-Committee sanctioned the extension by two months, up to the 31st October 1934, of the scholarship period of Mr. T. R. Narayanan, who has been sent to Cambridge for training in Plant Physiology prior to his taking up the post of Physiologist in the Madras Pempheres and Physiological Scheme.

Balance Sheet as at 31st March 1934.

RECEIPTS.

	Rs.	a.	p.	Rs.	a.	p.
Cotton cess receipts ..				91,08,563	8	6
Interest account—						
Amount received on investments	13,45,676	8	10			
Add—Refund of Income-tax deducted from interest	17,078	0	0			
	13,62,754	8	10			
Less—						
1. Interest paid in advance at the time of purchasing Government Paper (since recovered), interest on temporary overdraft and Bank's commission for collection of interest..	43,712	8	9			
2. Interest credited to Provident Fund account	4,886	6	2			
3. Bank's withdrawal charges for securities sold	2,366	1	0			
4. Income-tax deducted on interest	19,967	12	8			

EXPENDITURE.

		Rs.	a.	p.	Rs.	a.	p.
I.	A. Administration ..				14,28,333	3	5
	B. *Improvement of Cotton Marketing*—						
	1. Cost of exhibits, moisture tests etc...	74,779	0	2			
	2. Cost of growing cotton in India ..	67,500	0	0			
					1,42,279	0	2
	C. *Seed Distribution and Extension Schemes*—						
I.	*Bombay*—						
	1. Hubli	25,472	13	9			
	2. Gadag	27,988	4	9			
	3. Gadag Supplementary..	15,752	5	11			
	4. Khandesh	89,407	6	9			
	5. Surat	25,589	0	7			
	6. Athani	7,380	4	0			
II.	*Madras*—						
	1. Pay and allowance of Business Manager, Tiruppur ..	8,729	0	0			
	2. Co. 2	7,828	12	6			
	3. H-1	4,480	0	0			
III.	Sind	86,245	4	11			
IV.	Hyderabad	17,148	12	9			
V.	Central Provinces ..	71,310	11	5			
VI.	Lyallpur Ginnery ..	17,740	5	0			
					4,05,073	2	4

5. Brokerage for sterling loan sold ..	291 9 0		
6. Provision for Sinking Fund ..	4,728 7 0		
	75,952 12 7		
		12,86,801 12 3	
Profit on conversion and sale of securities		53,671 12 7	
Sinking Fund account ..		4,728 7 0	
Miscellaneous receipts ..		23,466 5 2	
Refund from Provident Fund for contributions disallowed ..		3,391 1 11	
Suspense receipts		1 0 0	
arried over ..		1,04,80,623 15 5	

D. *Printing and Propaganda*—			
1. Publicity and Propaganda ..	41,309 10 0		
2. Printing and Distribution	23,838 7 0		
			65,148 1 0
E. Statistical Research ..			5,463 0 0
H. *Technological Research*—			
(1) *Technological Laboratory*—			
A. Capital Expenditure—			
1. Land and Buildings .	3,77,917 7 3		
2. Machinery ..	86,336 1 8		
3. Freight	7,502 2 8		
4. Apparatus and Equipment	41,558 3 7		
5. Machinery Workshop.	5,789 8 3		
B. Working Expenses ..	13,59,655 4 0		
(2) Provincial ..	50,633 6 3		
			19,29,392 1 8
Carried over ..			39,75,688 8 7

BALANCE SHEET AS AT 31ST MARCH 1934—*contd.*

RECEIPTS.	Rs.	a.	p.
Brought forward ..	1,04,30,623	15	5

EXPENDITURE.	Rs.	a.	p.	Rs.	a.	p.
Brought forward ..				39,75,688	8	7
III. Research Studentships ..				2,20,814	2	6
Agricultural Research Grants—						
IV. *Bombay—*						
1. (*a*) Surat Physiological.	2,45,139	11	3			
(*b*) Surat Physiological Writing-up ..	6,035	7	6			
2. (*a*) Surat Boll-worm ..	1,14,509	9	7			
(*b*) Surat Boll-worm Propaganda ..	94,844	3	3			
(*c*) Surat Boll-worm Writing-up ..	2,315	3	0			
3. (*a*) Dharwar Wilt ..	1,82,836	4	11			
(*b*) Dharwar Wilt Writing-up ..	10,757	14	3			
4. Khandesh Cotton Breeding ..	26,573	6	0			
5. Co-ordination of Cotton Research ..	1,749	7	6			
6. Jalgaon Cotton Breeding	13,394	8	9			
7. Broach Cotton Breeding	19,738	11	3			
8. Small Leaf Disease ..	1,828	0	0			

V.	*Madras*—					
	(*a*) Herbaceum	..	1,04,482	12	2	
	(*b*) Pempheres and Physiological	..	50,439	5	9	
	(*c*) Fodder Cholam	..	7,757	10	4	
	(*d*) Nadam Cotton Breeding	..	2,328	0	0	
VI.	*Punjab*—					
	(*a*) Botanical	..	4,08,067	0	7	
	(*b*) Entomological	..	1,34,251	12	4	
	(*c*) White Fly	..	30,610	5	0	
	(*d*) Root Rot	..	5,403	7	0	
	(*e*) Spraying Trials	..	6,958	12	0	
	(*f*) Defibrating and Delinting	..	7,700	0	0	
VII.	Central Provinces	..	3,09,831	12	3	
VIII.	*United Provinces*—					
	(*a*) Pink Boll-worm	..	1,46,731	6	10	
	(*b*) Rohilkhand and Bundelkhand Cotton Survey	..	4,985	0	0	
IX.	Institute of Plant Industry, Indore	..	12,21,343	12	0	
X.	Sind	..	1,57,361	13	8	
XI.	*Burma*—					
	(*a*) Capital	..	2,906	15	5	
	(*b*) Cotton Improvement	..	18,486	11	6	
	Carried over	..	33,39,969	0	1	41,96,502 11 1
	Carried over	..				1,04,80,623 15 5

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BALANCE SHEET AS AT 31ST MARCH 1934—*concld.*

RECEIPTS.	Rs.	a.	p.	EXPENDITURE.	Rs.	a.	p.	Rs.	a.	p.
Brought forward ..	1,04,80,623	15	5	Brought forward ..	33,39,969	0	1	41,96,502	11	1
				Agricultural Research Grants—contd.						
				XII. *Hyderabad*—						
				(*a*) Botanical ..	1,13,469	13	11			
				(*b*) Cotton Survey ..	18,047	1	0			
				(*c*) Pink and Spotted Boll-Worm ..	7,680	0	0			
				XIII. Bikaner	28,376	6	9			
				XIV. *Baroda*—						
				(*a*) Root Rot ..	22,667	10	9			
				(*b*) Comparative Tests .	4,251	5	3			
								35,34,461	5	9
				Total Expenditure ..				77,30,964	0	10
				XV. Loans recoverable (but considered doubtful)—						
				1. Co-operative Cotton Sale Society, Hubli ..	8,063	9	3			
				2. Co-operative Cotton Sale Society, Gadag ..	7,292	0	0			
								15,355	9	3
				Suspense account				2,932	7	6
				By balance				27,31,371	13	10
Grand Total ..	1,04,80,623	15	5	Grand Total ..				1,04,80,623	15	5

BALANCE SHEET AS AT 31ST MARCH 1934.

Provident Fund Account.

RECEIPTS.	Rs. a. p.	Rs. a. p.
Subscribers' contributions ..	1,40,336 13 9	
Less—Payments made to subscribers resigned and ..	34,251 15 3	
		1,06,084 14 6
Committee's contributions ..	1,37,286 8 11	
Less—Payments made to subscribers resigned and forfeitures to the Committee and to the Lapses and Forfeitures account ..	32,220 1 11	
		1,05,066 7 0
Suspense deposit of Mr. Dutt's own contributions with interest		968 1 10
Investment fluctuation account.		23,984 9 5
Lapses and Forfeitures account.		246 1 1
Grand Total ..		2,36,350 1 10

EXPENDITURE.	Rs. a. p.	Rs. a. p.
By advances to subscribers ..	25,038 3 0	
Less—Recoveries made up to 31st March 1934	23,378 0 0	
		1,660 3 0
Accrued interest on Government Paper credited to subscribers up to 31st March 1934 ..		1,738 2 0
By Balance		2,32,951 12 10
Grand Total ..		2,36,350 1 10

Statement of Receipts and Payments for the year ended 31st March 1934.

RECEIPTS.	Rs.	a.	p.	Rs.	a.	p.
*Opening Balance ..	29,69,854	12	9			
Less—Adjustment of Dr. Pendleton's account ..	4	3	0			
				29,69,850	9	9
Receipts under Section 12 of the Indian Cotton Cess Act, 1923				5,83,672	8	7
†Other receipts				6,499	9	7
Interest on investments ..				1,32,624	0	5

EXPENDITURE.	Rs.	a.	p.	Rs.	a.	p.
Administration of the Committee (including Improvement of Cotton Marketing, Seed Distribution and Extension, Printing and Propaganda) ..				3,43,030	13	8
Agricultural Research Grants-in-aid.				4,09,543	14	9
Technological Research ..				1,90,412	1	4
Closing Balance—(Government Paper at cost)—						
3½ per cent. Government Promissory Notes of the face value of Rs. 7,06,300	4,43,583	2	5			
3½ per cent. Government of India Loan, 1947-50, face value of Rs. 2,75,000	2,18,032	13	0			
‡4 per cent. Government of India Loan, 1960-70, face value of Rs. 10,01,900	9,06,285	8	10			
4½ per cent. Government of India Loan, 1956-60, face value of Rs. 26,600	25,004	0	0			
5 per cent. Government of India Loan, 1939-44, face value of Rs. 3,09,000	2,96,679	13	6			
6 per cent. Bombay Municipal Debentures, 1954, face value of Rs. 50,000	56,500	0	0			
6 per cent. Karachi Port Trust Coupon Debentures, 1956, Face value of Rs. 1,30,000 ..	1,41,212	8	0			
6 per cent. Rangoon Municipal Debentures, 1955, face value of Rs. 3,83,500	4,15,328	2	0			
3½ per cent. India Sterling Loan Bearer-face value of £ 20,000 ..	2,20,688	14	10			
(Market value on 31st March 1934 Rs. 31,40,888-7-0).	27,23,314	14	7			

Imperial Bank of India Current Account	..	..	4,721	4	10
Imprest :—	Rs. a. p.				
Committee's Accounts as certified by the Secretary	.. 1,500 0 0				
Technological Laboratory as certified by the Director, Technological Laboratory	.. 500 0 0				
High Commissioner for India, London, for scholarships (£100)	1,335 10 5				
		3,335	10	5	
Suspense (Recoverable)	..	2,932	7	6	
Loans Recoverable (but considered doubtful)	..	.. 15,355	9	3	
§Total Closing Balance	..				27,49,659 14 7
		Total ..			36,92,646 12 4

Total	..	36,92,646 12 4

*Includes Rs. 3,672-2-0 on account of Sinking Fund and Rs. 15,355-9-3 against loans recoverable from Hubli and Gadag Co-operative Cotton Sale Societies.

†Includes Rs. 1,056-5-0 against provision for Sinking Fund for the year 1933-34 and Rupee one recovered in excess from the Director of Agriculture, Mozambique, against cost of cotton seed supplied to him.

‡4 per cent. Government of India Loan, 1960-70, of the face value of Rs. 1,16,900 has been deposited with the Imperial Bank of India for security against overdraft that may be required by the Committee.

§This includes Rs. 4,728-7-0 on account of provision for Sinking Fund.

We have examined the above Statement of Receipts and Payments of the Indian Central Cotton Committee with the Books, Vouchers and Certified Returns of the Committee, have obtained all the information and explanations we have required and certify that to the best of our information and explanations received, the above Statement is a correct abstract of the figures appearing in the Books and is drawn up in conformity with the Rules under the Indian Cotton Cess Act, 1923.

Bombay, 27th April 1934.

(Signed) S. B. BILLIMORIA & Co.,
Registered Accountants, Auditors.

Provident Fund Account as at 31st March 1934.

RECEIPTS	Rs.	a.	p.	Rs.	a.	p.
Opening Balance as on 1st April 1933 ..				1,70,531	0	11
Subscribers' contributions ..	17,606	6	0			
Less—Refunds for recoveries disallowed by Accountant General, Bombay ..	22	5	0			
	17,584	1	0			
Add—Recoveries against advances	3,141	12	0			
				20,725	13	0
				1,91,256	13	11
Less—Refunds to subscribers resigned, including wrong recoveries to Indian Central Cotton Committee.	2,435	4	8			
Advances to subscribers ..	2,855	14	0			
				5,291	2	8
				1,85,965	11	3
Committee's contribution received from Indian Central Cotton Committee at 100 per cent.				17,584	1	0
				2,03,549	12	3

EXPENDITURE	Rs.	a.	p.	Rs.	a.	p.
By Balance— (Securities in Government Paper at Market Price)—						
3½ per cent. Government Notes of the face value of Rs. 85,600 ..	75,970	0	0			
4 per cent. Government of India Loan, 1934-37, of the face value of Rs. 2,000	2,012	8	0			
4 per cent. Government of India Loan, 1960-70, of the face value of Rs. 32,600	33,578	0	0			
5 per cent. Government of India Loan, 1939-44, of the face value of Rs. 25,600	27,456	0	0			
6½ per cent. Bombay Improvement Trust Loan of the face value of Rs. 17,500	18,681	4	0			
Savings Bank Deposit with the Imperial Bank of India ..	38,456	8	3			
Savings Bank Account with the Imperial Bank of India ..	16,734	2	0			
Current Account with the Imperial Bank of India	20,063	6	7			
*Total Closing Balance ..		–		2,32,951	12	10

Less—Payments to subscribers who have resigned including transfers to Lapses and Forfeitures account for contributions disallowed and wrong recoveries to Indian Central Cotton Committee			2,391	3	10	
						2,01,158 8 5
Interest received on investments ..			7,465	11	3	
Interest received on advances to subscribers.			185	4	1	
Refund of Income-tax deducted on Interest received during 1932–33			221	13	0	
			7,872	12	4	
Less—Interest paid during the year to subscribers who have resigned—						
	Rs.	a. p.				
On their own contributions..	63	12 8				
On Committee's contributions.	61	11 6				
Income-tax deducted from interest on investments (recoverable)	105	5 3				
Bank's commission for collection of interest ..	17	13 0				
Cost of Stationery, Printing, Sundry charges, etc. ..	61	8 0				
			310	2	5	
						7,562 9 11
Lapses and Forfeitures Account ..						246 1 1
Investment Fluctuation Account ..						23,984 9 5
Total ..						2,32,951 12 10

Total .. 2,32,951 12 10

*Includes Rs. 968-1-10 being Suspense Deposit with interest thereon of Mr. Dutt's own contribution.

Examined and found correct.

Bombay, 27th April 1934.

(Signed) S. B. BILLIMORIA & Co.,
Registered Accountants, Auditors.

RECEIPTS.	Rs. a. p.	Rs. a. p.
To Opening Balance as on 1st April 1933	29,50,827 1 6	
Loans recoverable account ..	15,355 9 3	
Sinking Fund account ..	3,672 2 0	
	29,69,854 12 9	
Less—Adjustment of Pendleton's account .. Dr.	4 3 0	29,69,850 9 9
Cotton Cess Receipts ..		5,33,672 8 7
Interest account (Net) ..		1,32,624 0 5
Other Receipts		5,443 4 7
Sinking Fund account		1,056 5 0

EXPENDITURE.	Sanctioned budget.	Actual expenditure.	Saving resumed to closing balance.
	Rs. a. p.	Rs. a. p.	Rs. a. p.
I. A. *Administration* ..	1,51,160 0 0	1,10,302 7 4	40,857 8 8
B. *Improvement of Cotton Marketing*—			
(1) Cost of Exhibits, Moisture tests, etc. ..	5,000 0 0	1,201 10 4	3,798 5 8
(2) Cost of growing cotton in India ..	73,143 0 0	60,000 0 0	13,143 0 0
C. *Seed Distribution and Extension Schemes*—			
(1) Bombay Presidency—			
(*i*) Hubli ..	8,560 0 0	7,843 14 9	716 1 3
(*ii*) Gadag ..	9,240 0 0	8,364 11 11	875 4 1
(*iii*) Gadag Supplementary ..	4,612 0 0	4,488 4 1	123 11 11
(*iv*) Haveri ..	2,800 0 0	....	2,800 0 0
(*v*) Athani ..	6,322 0 0	5,440 4 0	881 12 0
(*vi*) Bailhongal ..	4,285 0 0	....	4,285 0 0
(*vii*) Surat ..	7,860 0 0	5,309 2 9	2,550 13 3
(*viii*) Khandesh ..	52,068 0 0	26,780 7 3	25,287 8 9

(2) Madras Presidency—											
(i) Pay and allowance of Business Manager, Tiruppur ..	3,600	0	0	3,474	3	0	125	13	0		
(ii) Co. 2 ..	11,630	0	0	6,482	15	6	5,147	0	6		
(iii) H.1 ..	4,480	0	0	4,480	0	0	....				
(3) Sind ..	38,000	0	0	36,450	6	11	1,549	9	1		
(4) Hyderabad State ..	5,056	0	0	4,472	14	4	583	1	8		
(5) Central Provinces ..	25,069	8	0	18,294	7	0	6,775	1	0		
(6) Baroda ..	5,120	0	0	....			5,120	0	0		
(7) Punjab—Sale of all Farm crop produce ..	5,000	0	0	.....			5,000	0	0		
D. *Printing and Propaganda*—											
(a) Publicity and Propaganda .	29,209	0	0	26,150	5	9	3,058	10	3		
(b) Printing and Distribution.	11,000	0	0	8,416	5	9	2,583	10	3		
E. *Statistical Research* ..	22,500	0	0	5,463	0	0	17,037	0	0		
Carried over ..	4,85,714	8	0	3,43,415	8	8	1,42,298	15	4		

Carried over ..	36,92,646	12	4

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RECEIPTS.	Rs.	a.	p.
Brought forward ..	36,92,646	12	4

EXPENDITURE.	Sanctioned budget. Rs.	a.	p.	Actual expenditure. Rs.	a.	p.	Savings resumed to closing balance. Rs.	a.	p.
Brought forward ..	4,85,714	8	0	3,43,415	8	8	1,42,298	15	4
II. *Technological Research*—									
1. Technological Laboratory—									
(*a*) Capital Expenditure ..	24,000	0	0	22,119	13	4	1,880	2	8
(*b*) Working Expenses ..	1,66,055	0	0	1,56,731	13	0	9,323	3	0
2. Provincial ..	14,500	0	0	11,560	7	0	2,939	9	0
III. *Research Studentships* ..	20,000	0	0	14,453	7	10	5,546	8	2
Agricultural Research Grants.									
IV. *Bombay*—									
(*a*) 1. Surat Physiological ..	514	0	0	434	5	0	79	11	0
2. Surat Physiological Writing-up ..	6,961	1	0	6,035	7	6	925	9	6

(b)	Surat Boll-worm Clean-up ..	60,683	0	0	32,885	5	3	27,797	10	9
(c)	1. Dharwar Wilt ..	120	0	0	....			120	0	0
	2. Dharwar Wilt Writing.	1,151	5	0	677	3	11	474	1	1
(d)	Broach Cotton Breeding ..	13,000	0	0	11,938	11	3	1,061	4	9
(e)	Jalgaon Cotton Breeding ..	7,414	0	0	6,853	1	9	560	14	3
(f)	Co-ordination of Cotton Research ..	1,000	0	0	124	2	6	875	13	6
(g)	Khandesh Cotton Breeding ..	340	13	0	340	13	0	....		
(h)	Small Leaf Disease Survey.	1,850	0	0	1,828	0	0	22	0	0
V.	*Madras*—									
(a)	Herbaceum ..	10,100	0	0	9,975	4	3	124	11	9
(b)	Pempheres and Physiological.	29,403	0	0	17,438	3	5	11,964	12	7
(c)	Fodder Cholam.	3,312	0	0	2,877	2	7	434	13	5
(d)	Breeding of Nadam Cotton ..	2,790	0	0	2,328	0	0	462	0	0
	Carried over ..	8,48,908	11	0	6,42,016	14	3	2,06,891	12	9

Carried over ..	36,92,646	12	4

RECEIPTS.	Rs.	a.	p.
Brought forward ..	36,92,646	12	4

EXPENDITURE.	Sanctioned budget.			Actual expenditure.			Savings resumed to closing balance.		
	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.
Brought forward ..	8,48,908	11	0	6,42,016	14	3	2,06,891	12	9
VI. *Punjab*—									
(*a*) Botanical ..	60,200	0	0	25,295	7	8	34,904	8	4
(*b*) Entomological .	22,060	0	0	18,270	5	3	3,789	10	9
(*c*) White Fly ..	11,920	0	0	11,695	5	6	224	10	6
(*d*) Root Rot ..	4,502	0	0	3,698	7	0	803	9	0
(*e*) Spraying Trials	8,000	0	0	3,708	12	0	4,291	4	0
(*f*) Physiological ..	4,462	0	0	....			4,462	0	0
(*g*) Defibrating and Delinting—									
(1) Non-recurring.	6,700	0	0	6,700	0	0	....		
(2) Recurring.	1,000	0	0	1,000	0	0	....		
VII. *Central Provinces* ..	47,619	0	0	34,439	2	1	13,179	13	11
VIII. *United Provinces*—									
(*a*) Recurring grant for staff ..	7,680	0	0	6,752	6	1	927	9	11

	(*b*) Rohilkhand and Bundelkhand Cotton Survey ..	5,200	0	0	4,985	0	0	215	0	0
IX.	*Institute of Plant Industry, Indore.*	1,00,000	0	0	1,00,000	0	0	....		
X.	*Sind* ..	28,143	0	0	23,015	8	2	5,127	7	10
XI.	*Burma Cotton Improvement.*	8,712	0	0	8,202	1	0	509	15	0
XII.	*Hyderabad*—									
	(*a*) Botanical ..	26,629	0	0	24,674	1	0	1,959	15	0
	(*b*) Cotton Survey.	9,163	0	0	8,162	11	2	995	4	10
	(*c*) Pink and Spotted Bollworm ..	11,680	0	0	7,680	0	0	4,000	0	0
XIII.	*Bikaner* ..	7,640	0	0	3,615	6	9	4,024	9	3
XIV.	*Baroda*—									
	(*a*) Root Rot ..	11,448	10	0	9,611	13	3	1,836	12	9
	(*b*) Comparative Tests ..	173	0	0	144	5	3	28	10	9
	Carried over ..	12,31,840	5	0	9,43,667	10	5	2,88,172	10	7

Carried over .. 36,92,646 12 4

RECEIPTS.	Rs. a. p.
Brought forward ..	36,92,646 12 4
Total ..	36,92,646 12 4

EXPENDITURE.	Sanctioned Budget.	Actual expenditure.	Savings resumed to closing balance.
	Rs. a. p.	Rs. a. p.	Rs. a. p.
Brought forward ..	12,31,840 5 0	9,43,667 10 5	2,88,172 10 7
XV. *Bengal Comilla* ..	3,085 0 0	....	3,085 0 0
Total ..	12,34,925 5 0	9,43,667 10 5	2,91,257 10 7
Less—Refunds of the unexpended balances in parts—			
(1) Lyallpur ginnery ..	....	—384 11 0	+384 11 0
(2) Surat Boll-worm Writing ..	....	—104 13 0	+104 13 0
(3) Dharwar Wilt ..	....	—191 4 8	+191 4 8
Total ..		9,42,986 13 9	2,91,938 7 3
XVI. *Loans recoverable (but considered doubtful)*—			
(1) Hubli Co-operative Cotton Sale Society.	8,063 9 3		
(2) Gadag Co-operative Cotton Sale Society ..	7,292 0 0	15,355 9 3	
By Balance ..		27,34,304 5 4	
Total ..		36,92,646 12 4	

RECEIPTS.	Rs. a. p.	Rs. a. p.
To Opening Balance on 1st April 1933		1,70,531 0 11
Subscribers' contributions account	17,584 1 0	
Committee's contributions account	17,584 1 0	
	35,168 2 0	
Recoveries against advances ..	3,141 12 0	
		38,309 14 0
Interest (Net) received ..	7,749 10 1	
Less—Expenses for stationery, stamps and professional charges to solicitors for amendment of Provident Fund Rules	61 8 0	
		7,688 2 1
Lapses and Forfeitures account		246 1 1
Investments fluctuation account		23,984 9 5
Total ..		2,40,759 11 6

EXPENDITURE.	Rs. a. p.
By refunds to subscribers, resigned, of their own contributions with interest	2,499 1 4
By payment of Committee's contributions with interest to subscribers, resigned, and forfeitures to the Provident Fund	2,452 15 4
By Advances made	2,855 14 0
By Balance	2,32,951 12 10
Total ..	2,40,759 11 6

Revised Estimates, 1934-35—All Heads.

(As passed by the Indian Central Cotton Committee at its 29th Meeting held on the 29th August 1934.)

RECEIPTS.		Rs.	a.	p.	Rs.	a.	p.
To Opening Balance	...	27,34,304	5	4			
Loans Recoverable account	...	15,355	9	3			
					27,49,659	14	7
Cotton cess receipts	...				5,00,000	0	0
Interest account	...				1,18,500	0	0
Miscellaneous receipts	...				4,000	0	0

EXPENDITURE.		Rs.	a.	p.	Rs.	a.	p.
I. A. Administration	..				1,51,020	0	0
B. *Improvement of Cotton Marketing*—							
(*i*) Cost of exhibits, moisture tests, etc.	..	5,000	0	0			
(*ii*) Cost of growing cotton in India	..	73,143	0	0			
					78,143	0	0
C. *Seed Distribution and Extension Schemes*—							
(1) *Bombay Presidency*—							
(*i*) Hubli	..	8,679	0	0			
(*ii*) Gadag	..	8,737	0	0			
(*iii*) Gadag Supplementary	..	5,159	0	0			
(*iv*) Haveri	..	2,800	0	0			
(*v*) Athani	..	12,465	0	0			
(*vi*) Bailhongal	..	4,285	0	0			
(*vii*) Surat	..	11,931	0	0			
(*viii*) Khandesh	..	46,535	0	0			
(*ix*) Deccan Canals (Banilla)	..	5,030	0	0			

(2) *Madras Presidency*—					
(*i*) Pay and allowance of Business Manager, Tiruppur ..	5,305	0	0		
(*ii*) Co. 2 ..	18,580	0	0		
(*iii*) H-1 ..	14,380	0	0		
(3) Sind ..	54,924	0	0		
(4) Hyderabad State ..	5,128	0	0		
	2,016	0	0		
(5) *Central Provinces*—					
(*i*) Verum cotton ..	8,997	4	0		
(*ii*) Extension and marketing of long staple cotton ..	38,754	0	0		
(6) Baroda ..	5,120	0	0		
(7) Punjab—Sale of all farm crop produce ..	5,000	0	0		
				2,63,825	4 0
D. *Printing and Propaganda*—					
(*a*) Publicity and Propaganda ..	30,074	0	0		
(*b*) Printing and Distribution ..	11,000	0	0		
				41,074	0 0
Carried over ..				5,34,062	4 0

Carried over ..		33,72,159	14 7

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RECEIPTS.	Rs. a. p.
Brought forward ..	33,72,159 14 7

EXPENDITURE.		Rs. a. p.	Rs. a. p.
Brought forward ..			5,34,062 4 0
E. Statistical Research ..			16,032 0 0
H. *Technological Research—*			
(1) *Technological Laboratory—*			
(*a*) Capital expenditure ..	42,600 0 0		
(*b*) Working expenses ..	1,71,198 0 0		
(2) Provincial ..	18,211 0 0		
(3) Development of alternative uses for Indian cottons ..	20,000 0 0		
			2,52,009 0 0
III. Research Studentships ..			20,000 0 0
Agricultural Research Grants—			
IV. *Bombay—*			
(*a*) Surat Boll-worm Clean-up Scheme.	4,584 0 0		
(*b*) Broach Cotton Breeding Scheme.	10,044 0 0		
(*c*) Jalgaon Cotton Breeding Scheme.	8,043 0 0		
(*d*) Small Leaf Disease Survey ..	3,268 0 0		

	(e) Dharwar Wilt Writing-up Scheme ..		145	4	0	
	(f) Survey of Goghari cotton ..		510	0	0	
	(g) Defibration of cotton seed ..		5,459	0	0	
V.	*Madras*—					
	(a) Herbaceum ..		9,110	0	0	
	(b) Pempheres and Physiological ..		35,859	0	0	
	(c) Fodder Cholam ..		4,168	0	0	
	(d) Breeding of Nadam cotton ..		2,528	0	0	
VI.	*Punjab*—					
	(a) Botanical ..		61,810	0	0	
	(b) Entomological (Pink and Spotted Boll-worms) ..		31,100	0	0	
	(c) White Fly ..		10,709	0	0	
	(d) Root Rot ..		4,814	0	0	
	(e) Spraying Trials ..		6,590	0	0	
	(f) Physiological ..		17,184	0	0	
	(g) Survey of Disease of Malformation .		2,674	0	0	
	Carried over ..	2,18,590	4	0	8,22,103	4	0

Carried over ..	33,72,159	14	7

RECEIPTS.

	Rs.	a.	p.
Brought forward ..	33,72,159	14	7

EXPENDITURE.

		Rs.	a.	p.	Rs.	a.	p.
	Brought forward ..	2,18,590	4	0	8,22,103	4	0
VII.	*Central Provinces*—						
	(*a*) Botanical ..	37,742	0	0			
	(*b*) Entomological ..	3,380	0	0			
VIII.	*United Prvoinces*—						
	(*a*) Recurring grant for staff ..	1,103	0	0			
	(*b*) Rohilkhand and Bundelkhand Cotton Survey ..	5,300	0	0			
IX.	Institute of Plant Industry, Indore ..	1,15,000	0	0			
X.	Sind ..	33,438	0	0			
XI.	Burma Cotton Improvement.	10,260	0	0			
XII.	*Hyderabad*—						
	(*a*) Botanical ..	56,710	0	0			
	(*b*) Cotton Survey ..	9,211	0	0			
	(*c*) Pink and Spotted Boll-worm ..	10,630	0	0			

		XIII.	Bikaner	..	7,640 0 0		
		XIV.	*Baroda*—				
			(*a*) Root Rot	..	11,718 0 0		
			(*b*) Survey of Goghari cotton	..	510 0 0		
		XV.	Bengal Comilla cotton	..	3,085 0 0		
						5,24,317 4 0	
		XVI.	Loans recoverable (but considered doubtful)—				
			(1) Hubli	..	8,063 9 3		
			(2) Gadag	..	7,292 0 0		
						15,355 9 3	
			By Balance	..		20,10,383 13 4	
Grand Total ..	33,72,159 14 7				Grand Total ..	33,72,159 14 7	

Revised Estimates, 1934-35—*Provident Fund Account.*

RECEIPTS.	Rs. a. p.	Rs. a. p.
To Balance on 1st April 1934		2,32,951 12 10
Subscribers' contributions ..	20,000 0 0	
Committee's contributions ..	20,000 0 0	40,000 0 0
Recoveries against advances ..		1,660 3 0
Lapses and Forfeitures account.		273 12 6
Interest receivable ..		8,900 0 0
Total ..		2,83,785 12 4

EXPENDITURE.	Rs. a. p.
By subscribers' contributions account	1,234 2 3
By Committee's contributions account	1,192 10 10
By Balance	2,81,358 15 3
Total ..	2,83,785 12 4

BUDGET FOR GOVERNMENT SERVANTS, 1935-36.

Budget for 1935-36 for pay and allowances of Government servants lent to the Indian Central Cotton Committee.

34-A—Agriculture.

INDIAN CENTRAL COTTON COMMITTEE.

Budget Estimates for 1935-36.

No.	Sub and detailed heads.	Amount of provision.
	PAY OF OFFICERS.	
	Non-Voted.	Rs.
1.	Secretary—Pay Rs. 350—50—1,250, overseas pay Rs. 300 and special pay 400	21,074
	Deduct—Emergency deduction from pay for March 1935 at 5 per cent.	—87
4.	Deputy Secretary—Pay Rs. 350—50—1,250, overseas pay Rs. 300 and special pay Rs. 250	16,800
	Deduct—Emergency deduction from pay for March 1935 at 5 per cent.	—70
	PERMANENT PAY OF ESTABLISHMENT.	
5.	Superintendent and clerks (at rates varying from Rs. 70 to Rs. 750)	22,057
	Deduct—Emergency deductions from pay for March 1935 at 5 per cent.	—89
	Leave-salary—Establishment	1,300
	ALLOWANCES, HONORARIA, ETC.	
	Non-Voted.	
	House-rent and other allowances	4,200
	Travelling allowance of officers	4,000
	Voted.	
	Travelling allowance of Establishment	300
	Total { Non-voted ..	45,917
	Total { Voted ..	23,568
	Grand total ..	69,485
	Deduct—Recoveries from the Committee	68,185
	Nett—Leave-salary of Establishment paid by Government ..	1,300

APPENDIX VIII.

SUBJECT 78.—*Universal Standards for Indian cotton—Progress Report.*

Secretary's Note.

At the last meeting of the Committee it was reported that in compliance with a Resolution of the Committee at its February 1933 meeting, the Local Sub-Committee had appointed a special sub-committee called the Standards Sub-Committee consisting of one representative of the Imperial Council of Agricultural Research, two of the East India Cotton Association and two of the Karachi Cotton Association for the purpose of preparing standards which would be common to the two Cotton Associations operating in India, *viz.*, the East India Cotton Association and the Karachi Cotton Association.

2. The Standards Sub-Committee, as constituted above, met twice in January 1934 and decided that standards should be prepared for the following cottons, the first four of which should be dealt with at Karachi and the remainder at Bombay :—

(1) Bengals.	(4) Sind-American.	(7) Dholleras.
(2) Sind.	(5) Oomras.	(8) Broach.
(3) Punjab-American	(6) Mathias.	(9) Kumptas.

3. The Standards Sub-Committee also decided which particular growths of the above cottons should be used for preparing standards and also the number and description of standards of each variety of cotton which should be prepared.

4. The constitution of the Standards Sub-Committee was modified as follows by the Local Sub-Committee at its meeting held on the 20th July 1934.

(*a*) When standards for such cottons as are dealt with by both the Karachi and East India Cotton Associations are to be passed by the Standards Sub-Committee, two representatives each of both these Associations and one representative of the Imperial Council of Agricultural Research would constitute the Standards Sub-Committee.

(*b*) When standards for such cottons as are dealt with by only one of the Associations are to be passed by the Standards Sub-Committee, the representatives of the Association not concerned should be replaced by two representatives of cotton growers of the cotton tract concerned.

5. The Local Sub-Committee also decided at its meeting on the 20th July 1934 that the Indian Central Cotton Committee should every year preserve in hermetically sealed boxes a set of standards passed by the Standards Sub-Committee for reference in case of dispute. No final decision was, however, arrived at as to where these standards should be stored and this point will be further considered.

6. At its meeting held on the 18th August 1934, the Local Sub-Committee decided that the appointment of the cotton growers on the Standards Sub-Committee should be made by the Committee on the recommendation of the Directors of Agriculture of the Provinces concerned but that should it not be possible to appoint two cotton growers for any tract, one person representing cotton marketing interests should be appointed in place of one of the cotton growers.

At this same meeting the Local Sub-Committee decided that members of the Standards Sub-Committee should be paid actual out-of-pocket expenses up to a maximum of a single first class fare by rail or steamer, mileage by road at six annas a mile and a daily allowance not exceeding Rs. 7 per day on days when they actually attend meetings of the Standards Sub-Committee.

APPENDIX IX.

SUBJECT 84.—*Proposed introduction of a common unit for the purchase of seed cotton throughout India.*

Secretary's Note.

The Committee at its meeting in January last passed the following resolution :—

"That in regard to the unification of weights for *kapas* the Indian Central Cotton Committee approves of the policy advised by the Governments of Bombay and United Provinces, *viz.*, that both the Railway maund of 82⅔ lbs., which is based on the tola and the khandy of 784 lbs. which is based on the pound avoirdupois should be retained and that efforts should first be concentrated on the elimination of unauthorised maunds and unauthorised khandies."

The decision of the Committee was communicated to the Governments of Bombay, Madras, Punjab, the United Provinces and the Central Provinces and to the Hyderabad, Baroda, Mysore, Gwalior and Indore States. The replies from the Local Governments are attached. No final reply has been received from any of the States addressed.

Bombay.—Under the Bombay Weights and Measures Act, 1932, the railway maund of 82⅔ lbs. denominated the Bombay maund is prescribed as one of the standard weights. The khandy is not being prescribed as one of the standard weights and hence in all future transactions, in which reference is made to the khandy, its equivalent will have to be specified in terms of one of the standard weights, *viz.*, lbs., quarters, cwts., tons or maunds, else all such transactions will be void. It is understood that the Act will be put into force from 1st March 1935 in Bombay City and the Districts of Broach, Surat, Thana, Bombay Suburban District, Ahmednagar, Poona, Satara, Belgaum, Karachi and Sukkur.

Madras.—The maund of 28 lbs. and the candy of 784 lbs. are being prescribed as standard units for all cotton transactions.

Punjab.—No cotton transactions are made by the khandy, the only unit of weight being the maund of 82⅔ lbs. The question of elimination of units of weight other than the maund does not arise.

United Provinces.—The Local Government have issued an amendment to the United Provinces Cotton Ginning and Pressing Factories Rules according to which all weighments of *kapas*, ginned cotton or pressed cotton must be made in the standard imperial maund of 82⅔ lbs. or the khandy of 784 lbs. and their fractions.

Central Provinces.—Cotton markets in the Central Provinces and Berar have been asked to take steps to adopt, before the next cotton season begins, the standard weights recommended by the Committee. Unauthorised weights will be gradually eliminated by the increasing use of the above standard weights by important buyers and sellers.

It is not apparent what the objection of the Bombay Government is to the standardisation of the khandy of 784 lbs., and it is for consideration if the Committee should not press for its recognition.

As regards the standardisation of a maund of 28 lbs. in Madras, the Local Government state that the growers and the trade are definitely in favour of this unit of weight.

APPENDIX X.

SUBJECT 85.—*Broadcasting of commercial news on cotton.*

Secretary's Note.

Mr. N. M. Deshmukh, a member of the Indian Central Cotton Committee, representing the cotton growing industry of the Central Provinces and Berar, has given notice of his intention to move the following resolution at the meeting of the Committee :—

"That the Indian Central Cotton Committee requests the Government of India to resume the broadcasting of all commercial news connected with cotton in the mornings particularly through Bombay Radio Station."

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